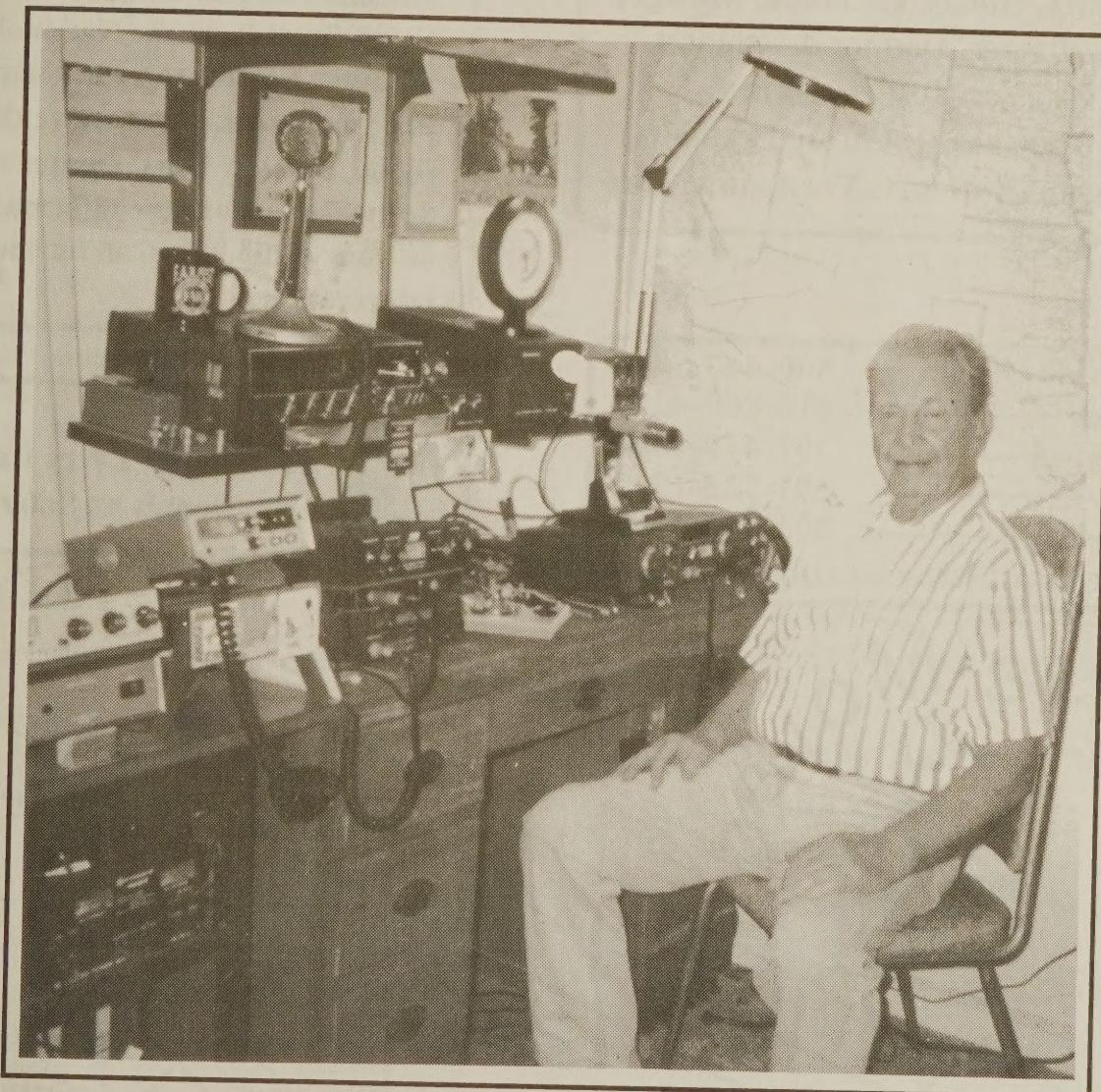




*The Official Journal of the Foundation For Amateur Radio, Inc.*

**JANUARY 1997**



Rules and Regs • ARRL Report • VE Exams Schedule  
Public Service Report • DX Column • Regional Hamfests  
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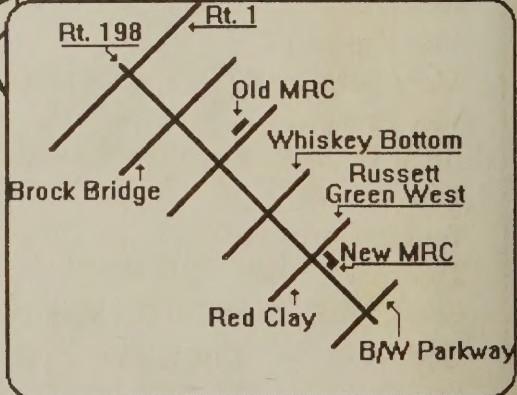
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# The Foundation For Amateur Radio, Inc.



Washington, DC

## In this month's issue . . .

### Regular & Special Features:

Regional Hamfests and Events . . . . .	4
Editor's Corner . . . . .	5
FAR Member Clubs . . . . .	6
Rules and Regs . . . . .	7
ARRL Report . . . . .	10
Elmer's Corner . . . . .	13
Setting FM Radio Frequency Deviation . . . . .	14
Traffic Fun . . . . .	15
Amateur Radio Training . . . . .	16
Examination Schedules . . . . .	17
Training Classes . . . . .	20
Amateur Radio Clubs - SPECIAL SECTION	25
Shack Sales . . . . .	51
Production Policy . . . . .	54

### Club Columns:

Antietam Radio Association . . . . .	33
Central Maryland Amateur Radio Club . . . . .	34
Dulles Amateur Radio Group . . . . .	34
Fauquier Amateur Radio Association . . . . .	36

Green Mountain Repeater Association . . . . .	36
Historical Electronics Museum ARC . . . . .	37
Laurel Amateur Radio Club . . . . .	38
Maryland Mobileers Amateur Radio Club . . . . .	39
Metrovision Amateur TV Club . . . . .	40
Mid-Atlantic DX and Repeater Association	41
Mount Vernon Amateur Radio Club . . . . .	42
Northern Virginia FM Association . . . . .	43
Prince George's Wireless Association . . . . .	43
Quarter Century Wireless Assn, #137 . . . . .	44
Quarter Century Wireless Assn, #91 . . . . .	45
Southern Maryland Amateur Radio Club . . . . .	46
St. Mary's County Amateur Radio Assn . . . . .	48
T-MARC . . . . .	48

Reminder - all submissions for



are due no later than  
the 1st of the month prior to the  
month of publication!!

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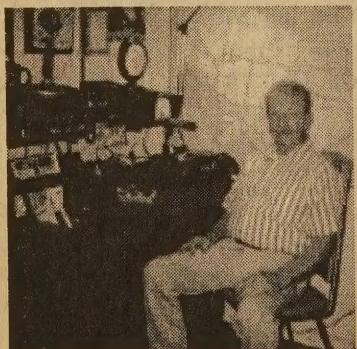
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# Regional Hamfests and Other Events

January 4	Lakeway ARC, Morristown, TN	423-828-4848
January 4-5	Fort Myers ARC, Cape Coral, FL	941-542-6675
January 11	Skyline ARC, Marathon, NY	607-849-6751
January 19	Metro 70cm Network, Yonkers, NY	914-969-1053
January 19	Frostfest '97, Richmond Amateur Tele. Society, Richmond, VA	804-526-9838
January 25	Tennessee Valley AR Network, Gallatin, TN	615-230-7923
January 26	Maryland Mobileers ARC, Odenton, MD	410-280-9815
February 1-2	Southeastern Division Convention, Miami, FL	305-642-4139
February 1-2	Mississippi State Convention, Jackson, MS	601-939-9236
February 8	Charleston ARS, North Charleston, SC	803-747-2324
February 9	Chestnut Ridge ARC, Latrobe, PA	412-539-1552
February 14-16	Northern Florida Section Convention, Orlando, FL	407-645-2026
February 15	Harrisburg RAC, Oberlin, PA	717-232-6087
February 16	Long Island Mobile ARC, Freeport, NY	516-796-2366
February 16	Briarpatch ARC & Foothills ARC, Elkin, NC	910-957-3820
February 22	Arkansas River Valley AR Found., Russellville, AR	501-967-3317
February 22	Hernando County ARA, Spring Hill, FL	352-799-1638
February 22	Dalton ARC, Dalton, GA	706-673-2291
February 22	Radio Amateurs of Northern Vermont, Milton, VT	802-879-6589
February 23	South Hills ARC, Pittsburgh, PA	
March 1	Black Warrior Swapfest, Tuscaloosa, AL	205-339-7882
March 1	NE Georgia Bubba Net, Athens, GA	706-742-2777
March 1	Split Rock ARA/West Morris Wire., Parsippany, NJ	201-584-5399
March 8	Kentucky Mountains ARC, Hazard, KY	606-436-5354
March 8-9	Roanoke Division Convention, Charlotte, NC	704-948-7373
March 9	Great South Bay ARC, Lindenhurst, NY	516-957-0218
March 15	Kennehoochee ARC, Marietta, GA	770-977-4405
March 15	Kerbela AR Service, Knoxville, TN	423-986-9562
March 16	Keystone VHF Club, York, PA	717-764-4805
March 16	Charleston Area Hamfest, Charleston, WV	304-768-1142
March 23	Delaware Valley Radio Assn., Trenton, NJ	609-882-2240
March 23	Down East Hamfest Assn., Kinston, NC	919-524-5724



## On The Cover

Pictured on this month's issue of *Auto Call* is Ken Easton, N3HLY sitting at his radio shack. Ken's home QTH is in Hyattsville, MD. Ken is a the PIO trustee to the Foundation for Amateur Radio representing the Prince George's Wireless Association and the Green Mountain Repeater Association.

# Editor's Corner

By John Queen  
KAØSEY



Well, here we are again. Another new year. A new year with a new opportunity to make new resolutions for New Year's.

I don't like making New Year's resolutions. Yet I always seem to make a few each year. My problem is that my resolutions are made with the best of intentions, but are rarely kept. Perhaps my goals have been too lofty.

I made a number of New Year's resolutions concerning ham radio last year. Resolutions that I fully intended to keep, but for whatever reason was not able to fulfill. In retrospect, I'm firmly convinced that it wasn't the resolutions that got me, but the way that I worded them...

Last year, I made the resolution to spend one night each week working 10 meters. It didn't happen. So this year, I'm making the resolution to spend one night walking 10 meters.

Last January, I made the resolution to Work All States. I wasn't able to do that. So, this year instead of trying to Work All States, I'm making the resolution to work at Allstate.

ATV has always interested me. Last year I was resolved to set up an ATV station. Of course, that didn't happen either. So this year, my resolution is to watch a TV station.

In the public service arena, last year I wanted to participate in third party traffic handling. I never made it that far. So this year, I'm making the resolution to drive through traffic and go to three parties.

Last year, I made the resolution to keep a good QSL log. Didn't happen. Nadda. So this year, I'm making the resolution to keep a good QSL card.

Here's something I've been putting off for years now. I've been wanting to repair the GASfet transistor in my 2 meter mobile station. So, for my resolution this year, I'm gonna drive 2 meters to the Mobil station and get some gas.

Last year, I made the resolution to put up a new ground-wave antenna. Did I do that? Of course not! So this year, I'm resolved to stand on the ground and wave at my antenna.

I think you get the point (besides being that this editorial is pointless). New Year's resolutions are not for me. Next year, I am resolved not to make any New Year's resolutions. I'll just go full noise quieting!

Wishing you the best in your endeavors in 1997...

73's, de KAØSEY, John

# The Foundation For Amateur Radio, Inc.



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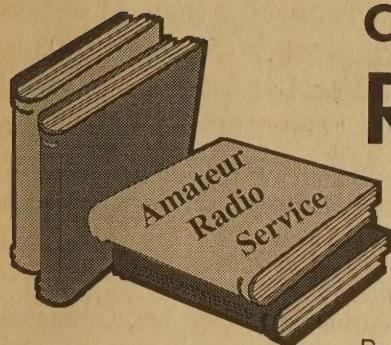
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MADRAS  
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Vienna Wireless Society  
Voice of America Amateur Radio Club  
Waldorf Repeater Support Group  
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Washington Area Young Ladies ARC  
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## NEXT FOUNDATION MEETING

The Foundation for Amateur Radio, Inc. meets at 8: p.m. on the second Wednesday of each month. **Visitors are always welcome!** The next meeting will be held January 8th at the Lee Center, Alexandria, Virginia. Take Capitol Beltway to Exit 1 (US 1 North). North to the second traffic light, left on Gibbon Street to Fayette. Left on Fayette to dead end at Lee Center Parking Lot. The meeting is conducted in the conference room near the main office of the center.

Talk-in on  
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# Rules and Regs

By Jack Kelleher  
W4ZC

## UNITY IS THE BEST POLICY

In a Guest Editorial in the December 1996 issue of QST, Bob Jones, VE3CTM, Director of ITU's Radiocommunication Bureau said in part: "...as many national Amateur Radio organizations have discovered, it is essential for you to speak with one voice even when there are genuine differences of view within the Amateur community. Unless you are unified, you will be victims of the 'divide & conquer' approach."

## IARU REGION 1 SUPPORTS CW

In the same issue of QST there is a report (page 85) on the highlights of the recent Region 1 IARU Conference in Tel Aviv. Of great interest is the report that "Based on a review conducted by another working group, the Conference recommended no changes to Article S25 of the international Radio Regulations".

## STATUS OF VANITY CALLSIGNS

Here is the text of ARRL bulletin #85, November 27, 1996. The FCC has granted approximately 700 new vanity call signs after turning down several petitions for reconsideration that had held up the program for a few weeks. Several hams whose Gate 2 applications arrived too early and were dismissed had petitioned the FCC to reinstate their applications. The petitions

were dismissed, according to an FCC spokesman. The latest call signs issued are from applications received by the FCC between September 24 and 27. An estimated 20 per cent ended up in the WIPS, or "works in process," stack for special handling—in some cases because the FCC was unable to grant any of the applicant's call sign choices, in others because there was a problem with the application. Applicants can check for new call signs using the FCC Transaction Engine on the ARRL Web page, <http://www.arrl.org/fcc/fccld.html>.

The FCC now gives equal weight to all vanity applications from any of the vanity gates opened to date. This means that a Gate 1 applicant trying to regain a former call sign who applied after the September 23 opening day for Gate 2 could miss out if that call sign already has been issued to a Gate 2 applicant. The FCC considers all vanity applications from all open gates in order of day received.

Meanwhile, the FCC also has worked its way through the estimated 550 first-day Gate 2 applications that ended up in WIPS. Following the initial wave of Gate 2 vanity call signs on November 4 (released to the public the following day) and before the most recent wave, the FCC granted another 176 call signs in all vanity categories, most, if not all, among the estimated 550 Gate 2, day-one applications that ended up in the WIPS stack at the FCC.

Applications for vanity call signs continue to show up at the FCC. From October 21 through November 7, the FCC had received an additional 459 vanity program applications. The FCC reports that 210 were hard-copy applications, while the other 249 were filed electronically. A spokesman in Gettysburg advised hams filing new or modified applications to be extremely careful in completing their paperwork. "We are seeing a lot of errors," he said. Among the common ones are a name that does not agree with the FCC's database, call sign incorrect, or a license that expires within a year and the renewal box is not checked. "Please double

*Continued next page*

check before you submit," he advised. "It creates a lot of extra work for us and delays the issuance of the license if you don't."

The FCC has not announced when it plans to open Gates 3 and 4 of the vanity program. More information on this subject appeared in Amateur Radio Newsline for November 22nd, as follows:

"The FCC says hard copies of the November 4 grants were mailed on November 8 and November 12, so new call sign holders should have their new tickets soon. Unsuccessful applicants will get dismissal notices once the FCC works through its stack of WIPS—or works-in-process—those applications that need some kind of special handling.

As many as 550 first-day applications ended up in the WIPS pile, either because the FCC was unable to match one of the applicant's call sign choices or because the application had other problems. Some of these were as simple as a date of birth on an application that was missing or failed to match one already in the FCC's database. Others included an incorrect call sign on an application, a name change not reported, or putting first and last name in the wrong order.

If you're in the WIPS pile for a reason other than "no match," a new call sign already may have been attached to your application. So far, there have been 3805 successful Gate 2 applicants. Many 1x2 call signs remain. As of this week, more than 6000 1x2 calls in all US districts remained available. The FCC has not said when it will process the approximately 1400 Gate 2 applications that were received after September 23, the opening day for Gate 2.

If your application is dismissed, you will have to apply to the FCC in writing to obtain a refund of your application fee. The FCC will not apply your first 30 dollar(s) filing fee toward a second application. You must request a refund if you want your money back.

## FCC PROPOSES NEW SERVICE FOR REALLOCATED 2.3-GHz

The FCC has proposed a new Wireless Communications Service or WCS in the 2,305 to 2,320 and 2,345 to 2,360 MHz bands and to award licenses on the basis of competitive bidding. The bands include a 5 MHz segment that Amateur Radio shares with government services between 2,305 and 2,310 MHz.

Just before it adjourned in October, Congress approved a provision as part of the much larger appropriations bill. It directed the FCC to put the 30 MHz of spectrum in the 2.3 GHz region up for competitive bidding to help balance the budget. It's believed to be the first time the Congress has ordered the reallocation of specific frequencies.

The FCC says the new WCS service would allow licensees to provide any fixed, mobile or radiolocation service, or satellite Digital Audio Radio Services. This, consistent with the international frequency allocations for these bands.

The Commission also proposed to adopt no restrictions on eligibility for a WCS license and to allow licensees to partition their service areas, to desegregate spectrum, and franchise portions of their spectrum or service areas on a leased basis. Competitive bidding for the two segments will begin no later than next April 15. Comments on the proposal are due at the FCC by December 4th and reply comments by December 16th. (Tnx ARN 11/22/96)

## ADVANCED CLASS VE'S

The ARRL has asked the FCC to change its rules to permit Advanced class volunteer examiners to administer the General class license examination.

Under current rules, Advanced class VE's can administer only Novice, Technician and Technician Plus examinations. The League's filing says that

*Continued next page*

allowing Advanced class VE's to administer General class examination elements will help to create additional opportunities for upgrading. It would also take some of the mounting pressure off Extra class VE's. The League estimates more than 15,500 additional elements could be administered each year if Advanced class VE's could administer exams up to the General class level. (Tnx ARN 11/22/96)

## ELECTRONIC LICENSE PROCESSING

A new license renewal benefit is now in place for ARRL members only. The ARRL VEC says that it will process FCC Form 610 applications for a renewal, address change, name change or call sign change for electronic submission to the FCC. There is no charge for this service but an original, signed Form 610 must be mailed or otherwise delivered to the ARRL VEC.

Sorry, but Faxed in 610's are not acceptable. Any questions or transfers should be directed to the ARRL VEC at area code (860) 594-0300. (Tnx ARN 11/22/96)

## AMATEUR SERVICE RETAINS ACCESS TO 13-cm BAND

Here are excerpts from an item in the November 15th issue of the W5YI Report. "The FCC has finally nailed down Amateur access to the 13 cm band. On October 18th the FCC released a fourth Report and Order in ET Docket No. 94-32 (Allocation of Spectrum below 5 GHz Transferred from Federal Government Use) in which the Amateur Service continues its co-secondary status in the 2300-2310 MHz segment (at least for now). New language was also added

to Part 97b elevating the Amateur Service 2390-2400 and 2402-2417 MHz segments to primary status.

The FCC also determined that the existing technical rules governing use of these bands are adequate and that no additional rules are needed. Thus, the Commission adopted their earlier tentative conclusion that the Amateur Service, unlicensed Data Personal Communications (Data-PCS) devices, and other unlicensed Part 15 devices can share their respective bands under existing rules without additional requirements.

The W5YI Report goes on to present a detailed history of this action, which began with the Omnibus Budget Reconciliation Act of 1993, which required the Secretary of Commerce to identify and transfer at least 200 MHz of Federal Government spectrum to private sector use. The history is much too lengthy to repeat here — we simply present the changes to Part 97 Rules:

"Section 97.303(j)(2) is revised to read as follows:

### B 97.303 Frequency Sharing Requirements

(2) In the United States, the 2300-2310 MHz segment is allocated to the Amateur Service on a co-secondary basis with the Government fixed and mobile services. In this segment, the fixed and mobile services must not cause harmful interference to the Amateur Service. The 2390-2400 MHz and 2402-2417 MHz segments are allocated to the Amateur Service on a primary basis. No Amateur station transmitting in the 2400-2450 MHz segment is protected from interference due to the operation of industrial, scientific and medical devices on 2450 MHz."

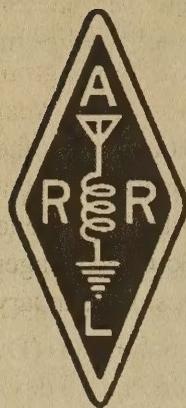
## WELCOME DULLES SUBSCRIBERS

*Auto-Call* welcomes 47 NEW subscribers from the Dulles Amateur Radio Group.

One check from that club covered all 47 subscribers for the 1997 calander year.

Maybe YOUR club would like to organize a group of subscriptions.

*Auto-Call* represents all FAR clubs and appreciates your support.



# American Radio Relay League Report

By John Swafford,  
W4HU

*The ARRL Report provides a brief summary of information published in the ARRL Letter and other reports. The Letter provides timely news of interest to active Radio Amateurs. Any League member may subscribe to the ARRL LETTER.*

## NU1AW: International Amateur Radio Union Club Station

Anyone who browses for interesting vanity call signs may have spotted the one for NU1AW, the international Amateur Radio Union club station. Trustee and ARRL Executive Vice President David Sumner, K1ZZ, relates the story behind this call sign:

Last year, when the FCC resumed issuing club call signs, IARU Secretary Larry Price, W4RA, and I thought it was time for the IARU to have one of its own. I applied for and received a "plain vanilla" KB1 call for the IARU. When Gate 2 opened, I submitted an application for a vanity call to replace the original call, paying the fee out of my own pocket. Why NU1AW? Glad you asked. When transoceanic amateur communication became commonplace by 1924, a problem immediately became apparent: typical call signs consisted of one numeral and two or three letters and no built-in means of determining who was where.

At first, hams used an informal system of prefixes (called "intermediates" at the time), where "A" stood for Australia, "B" for Belgium, "C" for

Canada, "F" for France, "G" for Great Britain, "J" for Japan, "U" for United States, "Z" for New Zealand, and so on. The single-letter system worked fine until it became apparent that Amateur Radio was spreading to too many countries for this system to accommodate.

The January 1927 QST unveiled a new intermediate list—the work of the Executive Committee of the international Amateur Radio Union. It was a two-letter system with the first letter indicating the continent ("E" for Europe, "A" for Asia, "N" for North America, "F" for Africa, etc.) and the second letter indicating the country (mostly following the old system).

Thus, stations in the 48 United States used the intermediate "NU". The new system was soon overtaken by events. Regulations adopted by the Washington International Radiotelegraph Conference later that same year included the allocation of a series of "call signals" such as K, N, and W for the United States, and mandated that stations have a call signal from the series.

August 1928 QST noted that Canadian amateur calls had changed to VE in April, and September 1928 QST announced the effective date of October 1, 1928, in the US for the W prefix (K outside the 48 states). Thus, United States amateurs sported voluntary NU prefixes for just 20 months before they became W's.

The founding president of the international Amateur Radio Union was, of course, Hiram Percy Maxim, 1AW, who remained in that office until his death in 1936. The call sign NU1AW commemorates HPM and the IARU's creative—if short lived—solution to the problem of international identification of stations.

Sumner said that he intends NU1AW to be a "permanent special-event station," operating in connection with World Telecommunication Day, significant IARU anniversaries, the IARU HF World Championship, and other events that will call attention to the contributions of the IARU to

organized Amateur Radio.

**Editor's Note:** The QCWA Chapter 91 in Northern Virginia went through the same procedure as the League - Tony Stalls, K4KYO advises that Chapter 91 was issued W4QCW effective Nov 26, 1996 with John Swafford, W4HU as Trustee.

### **Nominations Open for 1996 ARRL Instructor of the Year Awards**

It's a great way to say, "Thanks!" Consider for a moment the role of the Amateur Radio instructor or recruiter. Think about what they do for the hobby. I can recall several individuals who selflessly gave of their own time to teach license classes, distribute information and help newcomers. Fact is, I probably would not be a ham were it not for the dedicated people who took me under their wings and, after a false start or two, allowed me to fly on my own. I am forever grateful to these volunteers—heroes to me—who supported

Amateur Radio through teach or recruitment. Here's your chance to thank someone who may have given you a helping hand. This is the 18th year that the ARRL Board of Directors have recognized volunteer instructors and professional teachers through two awards. Any there are two newer honors: The Professional Instructor of the Year and the Excellence in Recruiting awards. Here's the complete lineup:

\*The ARRL Herb S. Brier Instructor of the Year Award—presented to a nonpaid volunteer instructor.

\*The ARRL Professional Instructor of the Year Award—presented to a paid non-certified instructor.

\*The ARRL Professional Educator of the Year Award—presented to a professional teacher.

\*The ARRL Excellence in Recruitment Award—presented to hams who exemplify outstanding recruiting enthusiasm and technique.

To nominate an individual for one of these awards, send an SASE to the ARRL Educational Activities Department, 225 Main St, Newington, CT 06111, and ask for an Instructor of the Year nominating form. (You can request a copy of the "Terms of Reference" for a given award via fax at 860-594-0259, or by e-mail to [ead@arrl.org](mailto:ead@arrl.org).) Send all nominations to your ARRL section manager (see page 12 of any QST for the address) by January 31, 1997.

### **IN BRIEF**

**ARRL National Exam Days:** ARRL-sponsored National Exam Days now will encompass two full weekends, in the spring and fall. Dates for 1997 will be the last full weekends of April and September: April 26-27, 1997 and September 27-28, 1997 (January 1997 QST "Exam Info" will carry a detailed announcement. If your VE team is interested in scheduling exams for either of these two weekends, please contact ARRL/VEC at [vec@arrl.org](mailto:vec@arrl.org)—Bart J. Jahnke, W9JJ

**ARRL catalog on Web:** The ARRL Publications Catalog—on the Web at <http://www.arrl.org/catalog/>—now includes online ordering capability. Check it out!

**ARRL/VEC test fee to rise:** The ARRL/VEC has set its 1997 Amateur Radio test fee at \$6.25. This is in accordance with an October 31, 1996, FCC Public Notice setting the maximum volunteer examiner expense reimbursement at \$6.25 for 1997. The current maximum is \$6.07. The new figure is based on a 3.1% increase in the Department of Labor Consumer Price Index (CPI) over the period September 1995 to September 1996.

As an ARRL/VEC policy, examinations which include only Elements 1(A) (5-wpm code test) and/or Element 2 (Novice written examination) will not be charged the standard fee in 1997. Morse code exemption applicants will be charged the

*Continued next page*

standard \$6.25 fee in 1997. For 1997, ARRL VE's may retain up to \$4 for each applicant they serve in order to offset their necessary and prudently-incurred expenses ARRL VEs who retain such expense reimbursements are required by the ARRL/VEC to retain income and expense records for three years. For more information contact the ARRL/VEC, tel 860-594-0300; e-mail vec@arrl.org—Bart J. Jahnke, W9JJ.

**New Outgoing QSL Service fee:** The fee for the ARRL Outgoing QSL Service is going up. Effective January 1, 1997, the fee for the Outgoing QST service will be \$4 per pound or any portion of a pound. The fee remains at \$1 for ten cards or fewer.—Joe Garcia, NJ1Q

**Electronic processing:** The ARRL/VEC will process—for members only—an FCC Form 610 for a renewal, address change, name change or call sign change for electronic submission to the FCC. There is no charge. An original, signed Form 610 must be mailed or otherwise delivered to the ARRL/VEC. Fax is not acceptable. Any questions or transfers should be directed to the VEC at 860-594-0300—Bart Jahnke, W9JJ

**DXCC Processing Status:** The DXCC Desk reports that the number of unprocessed applications at the end of October 1996 was 604 (46,284 QSLs). It received 340 applications (25,602 QSLs) for endorsements and new awards during the month. Applications being sent out at the end of October were received less than a month earlier. A few applications received prior to that time were in the process of being audited, and so had not yet been completed. For more information contact Bill Kennamar, K5FUV, tel 860-594-0291; e-mail bkennamar@arrl.org.

**Another H-T QSO with Mir:** Ed Tenhulzen, WH6CXQ, in Pearl Harbor, Hawaii, reports he worked Valeri Korzun operating on 145.55 MHz as R0MIR aboard the Mir space station on October 28. Ed was on his lunch hour at the time running 2.5 W to a Yaesu FT-208R and a mobile 5/8-wave antenna. Ed's friend, Ted Brattstrom, NH6YK, also

worked R0MIR. As Ed commented: "As you can see, it doesn't take all that much muscle to work Mir. It just takes persistence."—Ed Tenhulzen, WH6CXQ

**Youngest Extra redux:** Responding to our recent news brief about Thomas Coffee, AC6XC, who got his Extra ticket at age 10, another proud papa—Mike Siegel, WB2FCP, in Staten Island, New York—reports that his daughter, Debra, N2SIJ, passed her Extra class test in June 1993, some two weeks before turning 10. Debra is the youngest member of an all-ham family. Her mother Elaine, is N2GET. Her brother, Jeffrey, is N2IPU. "We were all very proud of Debra's accomplishments," Mike says.—Mike Siegel, WB2FCP

**Happy Birthday, Walter:** Former CBS Evening News anchor Walter Cronkite, KB2GSD, celebrated his 80th birthday November 4. Cronkite holds a Novice class ticket.

**W1B:** The FCC has granted special temporary authority for John R Fowler, N1PDV, to use the 1x1 call sign W1B on February 8-9, 1997, from Jericho, Vermont, to honor the 132nd anniversary of the birth of Wilson Alwyn "Snowflake" Bentley, the man credited with determining that no two snow flakes are alike, Fowler said. According to Fowler, Bentley—a Jericho, Vermont, native—photographed more than 5000 individual snowflakes using a camera rigged to a microscope. He also analyzed the density and shape of individual raindrops. Fowler said the W1B operation will include SSB and CW in the general portions of as many HF bands as the group can muster.

**Shannon Lucid plugs ham radio:** NASA Mission Specialist Shannon Lucid, who used the Mir Amateur Radio equipment during her six-month stay aboard the Russian space station doesn't have her ham license—yet. But she used ham radio aboard Mir and said some very nice

*Continued on page 49*



# Elmer's Corner

By Paul E. Wilkins,  
AB4CY

## 440 MHz AND THE WIND

They've begun installation of "wind profilers" at larger airports around the country. These are devices that measure the speed and direction of the wind at altitudes above the ground. At one time this was done infrequently during the day by releasing and tracking weather balloons.

With the discovery of wind-shear and wind microbursts and their hazard to aircraft landing and taking off they are designed to give real-time warning of dangerous conditions. A number of fatal aircraft accidents in the last few years have been attributed to these transient weather effects.

When an electromagnetic wave travels it often encounters different media to travel through. Along the surface of the earth it may encounter such things as a building, a hill, or a weather front where the temperature of the medium may change sharply.

When this happens three things happen to the electromagnetic wave: (1) some of it may be reflected, (2) some of it may be absorbed and lost, and (3) some of it may enter the new medium but after doing so travels at a slightly different speed and direction (an effect known as diffraction).

It turned out that 440 MHz radiation wavelength was one that responded well to changes in atmospheric media. Why this is so isn't so simple but shorter wavelengths scattered too much energy and longer wavelengths didn't reflect as well. In any event, a profiler emits a short pulse of EMR through an antenna directed vertically upward.

An array of receiving antennas on the ground listens for a reflected signal return much like a

radar. If the transmitted signal encounters a change in the air density (temperature) it signals a change in medium by reflecting energy from that layer. When the new medium is also moving, it will drag the transmitted and received signal along with it producing a doppler shift of the original signal.

By measuring the doppler shift, you can determine remotely the speed and direction of the new medium. The radar properties measure the range from the transmitting antenna. The transmitted signal continues vertically through the atmosphere and may encounter several other changes in media other layers, speed, and directions that are also detected. Interest in wind profiling is generally limited in only in the first few thousand feet of altitude above the ground.

Because of the short radar range transmitted pulse widths are extremely short and profilers need not be run continuously in good weather. Nobody set out to steal our band, it just technologically worked out to be the best place to get the job done.

Wavelengths between 30 and 440 MHz are affected by atmospheric medium changes. A ground based atmospheric inversion which occurs on cool, windless, clear nights when the ground cools by radiation into the night sky and absorbs heat from the air in contact.

As the inversion builds a cool layer of air forms under the warmer upper air and the layer rise as it grows. The boundary may rise to several thousand feet. Radiation crossing this layer is reflected and refracted. This is the primary reason for wide variations in local ten meter evening transmissions.

Two meter signals beamed at a strong oncoming cold weather front will be both reflected and refracted providing a significant, if temporary, increase in coverage.

Strong inversion layers are often found over the ocean. These have made it possible to "duct" a signal on two meters from California to Hawaii by bouncing it between the ocean surface and the elevated inversion layer.

# Setting FM Radio Frequency Deviation

## Stan Staten, W3INK

Over the years as an avid FM user, I have needed to set the transmitter audio level, or frequency deviation many times. This usually required use of a commercial test set. I would arrange for a friend in a two way radio shop to make the adjustment. Unfortunately, his help was not always available. When I first became a ham in the 60's, I had some close friends in this business and got a look at the schematic for their "Motorola test set". As I was anxious to learn about the technology of FM radios, that particular schematic provided an important piece of information. The test set simply measured frequency deviation by use of an AC VTVM hooked to a receiver's audio output. The AC VTVM scale simply read in frequency deviation rather than voltage.

Once when I needed to make a deviation adjustment and my friend in the radio shop was

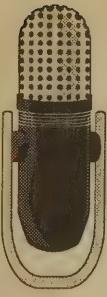
not available, I tried using my AC VTVM on the speaker leads of another radio and "calibrated" it by watching the audio levels from different repeaters. I noted the AC VTVM reading for signals that seemed to be about right and set my radio to the same level by matching their "voltage level" on the HT speaker leads.

Now, when I need to set the deviation of a radio, I use my HT with a sensitive multimeter hooked to the earphone jack. With this setup, it seems that the AC voltage measured with the squelch open is about that expected for 5 KHz deviation signal. When I set up my last 9600 Baud radio/TNC combination, I simply turned the HT volume up until the multimeter read 0.05 volts with the squelch open and then set the 9600 Baud TNC output level until the multimeter read 0.03 volts.

*Continued next page*

## T-MARC ANNOUNCES THE CREATION OF AN OPEN BAND PLANNING COMMITTEE

At its Annual Meeting on November 17th, the members of T-MARC approved the creation of an Open Band Planning Committee (OBC). This committee is charged with developing and implementing band utilization plans for the Amateur VHF, UHF and SHF bands within the T-MARC area (Delaware, D.C., Maryland, northern Virginia and eastern West Virginia) which will take into consideration the needs/desires of all users/user groups of these bands (including, but not limited to, weak signal/EME, SSB/CW, Space Shuttle/satellite, digital, spread spectrum, television, FM, repeater, auxiliary and simplex), in an effort to obtain maximum frequency utilization consistent with minimum inter-/intra-mode interference. Committee membership is open to representatives from all interested user groups, as listed above. T-MARC will provide a chairman and administrative support for the committee. The OBC is intended to be an on-going effort which will periodically review, and if appropriate, modify the various band plans as new technologies emerge, and/or as other forms of Amateur operation decline. Because recommendations adopted by this committee can affect Amateur operations in our neighboring areas, input from adjacent-area groups and pertinent nation-wide committees/organizations will be solicited. Within T-MARC, committee recommendations will, after being approved by the T-MARC Board of Directors, be presented to the general membership for approval. Any Amateur who might be interested in participating on this committee is invited to drop T-MARC a brief note describing your interests and experience. Include your address, home and work phone numbers, and E-mail address (if you have one). See the T-MARC column for our address.



## Traffic Fun

By Geri Sweeny,  
N4GHI

**PUBLIC SERVICE:** The ARRL Handbook says: 'Amateur Radio is a grand and glorious hobby, but this fact alone would hardly merit the wholehearted support given it by nearly all the world's governments at international conferences. There are other reasons. One of these is a thorough appreciation of the value of amateurs as sources of skilled radio personnel in time of emergency'.

The handbook claims that DX stations provide important backup communications. But, who is on the front line? Who trains on a regular basis to handle tactical and health and welfare traffic? Who meets daily to practice necessary procedures to pass this traffic? The National Traffic System sponsored by the ARRL.

You don't have to be a member of the ARRL to enjoy this activity. Traffic nets are opened to all. They come in Local (2-meter) and Section (HF - voice and CW) Levels. Whatever license you have, you can participate. By taking part, you will be prepared to join the effort next time an emergency occurs; whether an earthquake in Mexico, or a hurricane here in the Washington DC area.

### Frequencies, continued from page 14

This seems to work just fine so that I assumed that the deviation is actually set close to the 3 KHz needed. Later we compared this method of measurement with a radio that had been setup in a professional two-radio shop and was pleased to see that my measurement was rather close to the recent professional measurement.

If you want to try this, some experimentation

How do you use your radio? Traffic handling backs up most other activities. Messages are often sent saying: 'Thanks for the nice QSO.' Contesters send, 'Happy to have worked you on the contest'. DXers send, 'Your QSL card received, mine in the mail'. QSO bureaus send messages saying cards await arrival of an SASE. Messages are often sent arranging schedules with friends. It's a great way to meet new friends and stay in touch with old ones. It's a great way to make sure you occasionally turn on your radio. Listen in and join us. It's a lot of fun.

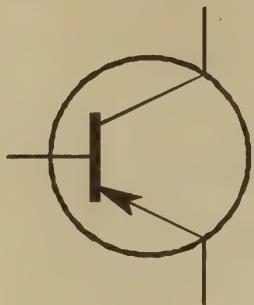
Don't you know someone that you would like to send a short message? Someone between your family, who you need to call on the phone and a complete stranger. Perhaps someone to just wish 'Happy Birthday', or 'Thinking of You'.

### TRAFFIC NETS

BTN (Balt.TfcNet)	6:30 pm	146.67
NVTW (NoVaTfcNet)	7:30 pm	147.30
DCTN (DCTfcNet)	8:00 pm	147.36

VNT (VaTfcNet)	1:00 pm	3907
MEPN (MdEmerPhoneNet)	6:00 pm	3920
VSBN (VaSidebandNet)	6:00 pm	3947
VNE (VaNet - Early)	7:00 pm	3680 (CW)
MSN (Md Slow Net)	7:30 pm	3717 (CW)
VNL (VaNet - Late)	10:00pm	3680 (CW)
MDD (MdDe)	10:00pm	3943
VLN (Va Late Net)	10:15pm	3947

with the test equipment might be needed to get the "calibration" right for your setup, but once you have it, you can set the frequency deviation when needed without the use of expensive test equipment. One point, though, not all multimeters will work. Many of the cheap ones have either 5 or 10 volts as their most sensitive AC scale. I found that I needed something more sensitive and use a meter with a built in amplifier (i.e. a "transistorized VTVM") to get the more sensitive AC scale needed.



# Amateur Radio Training

John Forrest WZ4A

6111 Burnett St., Alexandria, VA 22310

(703)971-3905

Please send announcements for training classes and club training contacts to WZ4A at the above address. Deadline is the 25th of the 2nd month prior to the *Auto Call* publication date (e.g., 25 December for the February issue).

## Club Training Contacts

Alexandria RC	Rich Adamy KA4GFY	(703) 644-3920
Anne Arundel RC	Tony Young WA3YLO	(301) 262-1917
Arlington ARC	Mike Callaham NW3V	(703) 241-5618
Antietam Radio Assn.	Robert Long KD3JK	(301) 824-5132
BRATS (Baltimore)	Joe Chidester W3SHZ	(410) 602-0353
Baltimore ARC	Essex Community College	(410) 780-6854
Fauquier ARC	Neil Spokes AB4YK	(540) 364-3861
Frederick ARC	Hal Silverman W3HWC	(301) 831-7946
Herndon Rep't Gp	Michael Weber WB8RDN	(703) 450-2304
Laurel ARC	Pud Reaver W3DQI	(301) 498-6293
Madras	Larry Ziecheck	(301) 984-6113
MD Mobileers ARC	Bruce Colburn AA3KR	(410) 437-1891
Montgomery ARC	Rocky Jones KC4UXO	(301) 216-5210
Mt. Vernon ARC	John Forrest WZ4A	(703) 971-3905
NASA/Goddard ARC	Vikki Gigante KA3PVS	(301) 249-2609
Ole VA Hams ARC	Charles Dale WA4YGI	(703) 361-3091
Pentagon ARC	David Boyd K9MX	(540) 659-6241
St. Marys Co. ARC	Peter Butt WA3UMY	(301) 862-2214
Shenandoah Val ARC	Guy Black W4PSJ	(540) 722-4952
Southern MD ARC	Vic Curtis WA3YUV	(301) 888-1388
Southern Pax ARC	Dwayne Kincaid WD8OYG	(410) 586-2177
Stafford Adult Ed	Jerry Mullinix AC4HK	(540) 659-3905
Sterling Park ARC	Forrest Snyder N4UTY	(703) 430-4149
Tri-County ARC	John Creel WB3GXW	(301) 572-5124
Vienna Wireless	Paul Wilkins AB4CY	(703) 560-2779
Woodbridge Wireless	Jim Duffey WD4AIR	(703) 491-3170

# The Foundation For Amateur Radio, Inc.



Washington, DC



## Volunteer Examiner Cooperative

JOHN FORREST WZ4A  
6111 Burnett St.  
Alexandria, VA, 22310  
(703) 971-3905

\* Effective July 1, 1996, the Extra Class written exam question pool (Element 4B) will change. It is anticipated that the new question pool will be significantly different from the old pool. Be sure to use study materials appropriate for the current question pool.

\* The maximum exam fee has been raised by the FCC to \$6.05.

\* Copies of the complete (as of date) 1997 VEC Exam schedule from the *Auto Call* database are available. To obtain a copy, please send a large, self-addressed envelope with sufficient postage to cover 10 letter-size pages along with \$2.00 to cover copying costs to WZ4A at the above address.

\* **ATTENTION VE's:** It's time to plan your 1997 test dates. Please send your 1997 information to WZ4A as soon as possible.

## 1997 Schedule of Examinations

January 5 (Sunday)	<p><b>Landover, MD - D.C.M. ARC (ARRL VEC)</b> Walk-In Contact: Freddie Battle NG3G (202)546-9348 (Day) (301)773-2898 (Evening)</p>
	<p><b>Elkins, WV - (Mountain ARC VEC) Walk-In</b> Contact: Walter Corley KF8SX (304)637-0506</p>
January 11 (Saturday)	<p><b>Alexandria, VA - Mt. Vernon ARC (Laurel VEC)</b> Walk-In Contact: Frank Mackey K4EC (703)455-1510</p> <p><b>Davidsonville, MD - Anne Arundel Radio Club (Laurel VEC)</b> Walk-In Contact: Bob Israel WC3I (301)262-5083</p>

***Don't forget to bring your license when upgrading!!***

<b>January 18 (Saturday)</b>	<p><b>Laurel, MD</b> - Laurel ARC (Laurel VEC)      Pre-Registration Desirable, Limited Walk-In Contact:      John Creel WB3GXW (301)572-5124 after 6 PM</p> <p><b>Manchester, MD</b> - Hanover Area Hamming Assn (ARRL VEC)      Walk-In accepted, Pre-Registration Encouraged      Contact: Ed Daves (410)239-8488</p>
<b>January 25 (Saturday)</b>	<p><b>Alexandria, VA</b> - Mt. Vernon ARC (Laurel VEC)      Elements 2 and 3A Only. Pre-Registration Required.      Test Limited to 20 Applicants.      Contact: Bill Schmitt KD4CNS (703)960-9301</p>
<b>January 26 (Sunday)</b>	<p><b>Odenton, MD</b> - Maryland Mobileers ARC (Laurel VEC) Pre-Registration Requested, Walk-Ins Space Available      Contact: Jerry Gavin NU3D (410)761-1423</p>
<b>February 2 (Saturday)</b>	<p><b>Landover, MD</b> - D.C.M. ARC (W5YI VEC) Walk-In Contact:      Freddie Battle NG3G (202)546-9348 (Day)      (301)773-2898 (Evening)</p>
<b>February 8 (Saturday)</b>	<p><b>Cumberland, MD</b> - (Mountain ARC VEC) Walk-In      Contact: Leo Patterson KQ8E (304)289-3576 Gay Rembold W3DFW      (301)724-0674</p> <p><b>Alexandria, VA</b> - Mt. Vernon ARC (Laurel VEC)      Walk-In Contact: Frank Mackey K4EC (703)455-1510</p>
<b>February 15 (Saturday)</b>	<p><b>Laurel, MD</b> - Laurel ARC (Laurel VEC)      Pre-Registration Desirable, Limited Walk-In      Contact: John Creel WB3GXW (301)572-5124 after 6 PM</p>
<b>February 25 (Tuesday)</b>	<p><b>Annapolis, MD</b> - Maryland Mobileers ARC (Laurel VEC)      Pre-Registration Requested, Walk-Ins Space Available      Contact: Lois Turner KA3VVQ (410)647-4178</p>

**March  
1  
(Saturday)**

**Sterling, VA** - Dulles Amateur Radio Group (ARRL VEC)  
Walk-In Contact: Mike Weber WB8RDN (703)450-2304

**March  
2  
(Sunday)**

**Landover, MD** - D.C.M. ARC (ARRL VEC) Walk-In  
Contact: Freddie Battle NG3G (202)546-9348 (Day)  
(301)773-2898 (Evening)

**Elkins, WV** - (Mountain ARC VEC) Walk-In Contact:  
Walter Corley KF8SX (304)637-0506

**March  
8  
(Saturday)**

**Alexandria, VA** - Mt. Vernon ARC (Laurel VEC) Walk-In Contact: Frank Mackey K4EC (703)455-1510

**March  
15  
(Saturday)**

**Laurel, MD** - Laurel ARC (Laurel VEC) Pre-Registration Desirable,  
Limited Walk-In  
Contact: John Creel WB3GXW (301)572-5124 after 6 PM

**Manchester, MD** - Hanover Area Hamming Assn (ARRL VEC)  
Walk-Ins accepted, Pre-Registration Encouraged  
Contact: Ed Daves (410)239-8488

**March  
25  
(Tuesday)**

**Glen Burnie, MD** - Maryland Mobileers ARC (Laurel VEC)  
Pre-Registration Requested, Walk-Ins Space Available  
Contact: Jerry Gavin NU3D (410)761-1423

**April  
6  
(Sunday)**

**Landover, MD** - D.C.M. ARC (W5YI VEC) Walk-In  
Contact: Freddie Battle NG3G (202)546-9348 (Day)  
(301)773-2898 (Evening)

**April  
12  
(Saturday)**

**Alexandria, VA** - Mt. Vernon ARC (Laurel VEC) Walk-In  
Contact: Frank Mackey K4EC (703)455-1510

**Cumberland, MD** - (Mountain ARC VEC) Walk-In  
Contact: Leo Patterson KQ8E (304)289-3576  
Gay Rembold W3DFW (301)724-0674

**April  
19  
(Saturday)**

**Laurel, MD - Laurel ARC (Laurel VEC)**  
Pre-Registration Desirable, Limited Walk-In  
Contact: John Creel WB3GXW (301)572-5124 after 6 PM

**April  
29  
(Tuesday)**

**Annapolis, MD - Maryland Mobileers ARC (Laurel VEC)**  
Pre-Registration Requested, Walk-Ins Space Available  
Contact: Lois Turner KA3VVQ (410)647-4178

***Don't forget to bring your license when upgrading!!***

### **-TRAINING CLASSES -**

**PLEASE SUBMIT ALL TRAINING CLASS ANNOUNCEMENTS TO THE TRAINING EDITOR, JOHN FORREST WZ4A, NOT TO THE AUTO CALL EDITOR.**

**NO-CODE TECHNICIAN COURSE:** Explorer Post 80, the Mount Vernon Amateur Radio Club, and the First Christian Church of Alexandria, VA will present an entry-level amateur radio course for the nocode Technician class license. The course will meet as follows: Wednesday evening, January 8, 1997 from 7:30 to 9:30 PM Saturday, January 18, 1997 from 9:00 AM to 4:00 PM Saturday, January 25, 1997 from 9:00 AM to 6:00 PM. The location is the First Christian Church, 2723 King St., Alexandria, VA. Cost is \$20 which includes the text and handouts. Pre-registration is required by January 3, 1997. Contact Bill Schmitt KD4CNS at (703)960-9301 between 7 - 10 PM or leave name, address, and phone number on answering machine at other times.

**GENERAL/ADVANCED CLASS UPGRADE COURSE:** The Mount Vernon Amateur Radio Club will present an upgrade course for the General class license and, if sufficient interest is expressed, the Advanced class license. Morse code training will be offered. The course will meet in Alexandria, VA from 7:30 to 9:30 PM on Wednesday evenings starting in mid-January 1997. Starting date and location to be announced later. There is no charge for the course; however, students will be required to provide their own license manuals and study materials. Contact John Forrest, WZ4A at (703)971-3905 to sign up or for more info.

**GENERAL CLASS UPGRADE COURSE:** The Montgomery Amateur Radio Club will present an upgrade course for the General class license in the Spring of 1997. Both theory and Morse code training will be offered. The course will be held at Gaithersburg High School in Gaithersburg, MD. Classes will be on Tuesdays and Thursdays from 7:00 until 9:00. Exact dates will be announced later. There is no charge for the course; however, students will be required to provide their own study manuals. Contact Rocky at 301-216-5210 or Peggy at 301-330-0027 to sign up or for more information.



# Volunteer Examiner Cooperative

## EXAM FEES:

- \* Check for appropriate exam fee. Fees and modes of payment for individual VECs and exam teams may vary.
- \* ARRL VEC exams cost \$6.05
- \* Laurel VEC exams are free
- \* Mountain VEC exams are free
- \* W5YI VEC exams cost \$6.05

## BRING TO EXAM:

- \* Picture identification
- \* Completed FCC form 610 (most VE teams will supply at exam)
- \* Original and a copy of current FCC amateur radio license
- \* Originals and copies of all active certificates of successful completion of prior exams
- \* Exam fee (check or cash depending on VE team)

## "GRANDFATHER" CREDIT FOR ELEMENT 3B (GENERAL WRITTEN):

- \* If you presently hold a Technician class license which was first issued prior to March 21, 1987, you may be grandfathered for Element 3B (General class written exam) by presenting the original and a copy of the license dated prior to March 21, 1987 to the VE team. It is your responsibility to prove that you are entitled to grandfathering. Do not lose your original license!

## RULES FOR SUBMISSIONS TO THE FAR VOLUNTEER EXAMINER COOPERATIVE:

1. All submissions must be in writing
2. Date and day of week must be specified for each exam date
3. Point of contact and phone number must be specified
4. Sponsor and location must be specified
5. VEC must be specified
6. Exam dates up to 12 months in advance will be accepted
7. Deadline for submission is 25th of the 2nd month prior to publication date (e.g., January 25 for March issue)



# MARYLAND MOBILEERS AMATEUR RADIO CLUB, INC.



## POST HOLIDAY SWAPFEST AND FLEAMARKET

**SUNDAY, JANUARY 26, 1997**

**8 A.M. 'TIL 2 P.M.**

*(Vendor Set-Up Starts At 6 A.M.)*

**ODENTON VOL. FIRE DEPT. - HALL  
1425 ANNAPOLIS ROAD (RT. 175)**

**ODENTON, MARYLAND**

*(Located on Route 175, 9 Miles East of I-95)*

**\$3.00 DONATION AT THE DOOR**

**•INDOOR FLEA MARKET**

*(NO TAILGATING)*

**•FREE PARKING**

**•V.E.C. TESTING**

*(ADVANCED REGISTRATION REQUESTED)*

**•TALK-IN ON 146.205/805**

**•REFRESHMENTS AVAILABLE**

For General Information/Table Reservations Contact:

Bill - KA6TYY at (410) 987-2384

E-Mail: JSBR65A@PRODIGY.COM

Or Mail A Donation Of \$7.00 (Covers Table & 1 Operator) Make Check Payable To:  
M.M.A.R.C.

ATTN: Bill Ziegler

1307 Ashburton Drive

Millersville, MD 21108

Deadline for Mail-In Reservations is 1/10/97

FOR V.E. TESTING INFORMATION AND REGISTRATION CONTACT:

Jerry - NU3D at (410) 761-1423

# • • • ANNOUNCING • • •

**CLEAR, CRISP, & STRONG REPEAT AUDIO!**

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- OUR NEW C3I-100PG, WITH PATENT-PENDING AGC, WILL MAKE ALL YOUR USERS VERY PLEASED. ELIMINATE WEAK AUDIO, STOP "PICKED FENCING", BRING EVERYONE USING YOUR REPEATER UP TO FULL QUIETING WITHOUT RAISING YOUR NOSIE FLOOR OR HEARING THE PUMPING ACTION ASSOCIATED WITH ALL OTHER AGC CIRCUITS. THIS NEW PRODUCT IS OUR HOTTEST SELLER, 100s ARE NOW IN USE, CALL FOR FURTHER DETAILS. THIS IS AN AUDIO PROCESSOR AS WELL, SIMILAR TO OUR STANDARD PRODUCT, THE C3I-100OP.
- OUR NEW C3I-1000TT, IS A PANEL-MOUNT, 16 BUTTON MATRIX, SELECTABLE LOGIC, DTMF PAD, WITH FULL CONTROL OVER AUDIO LEVEL AND TIMING. WORKS PERFECTLY WITH THOSE CONTROLS THAT DEMAND PRESENCE OF COS BEFORE DECODING. NOW YOU WON'T HAVE TO USE A FAKE DTMF TO SIMULATE COS BEING PRESENT.
- ARE YOU TIRED OF LISTENING TO USER SQUELCH TAILS? GET RID OF THEM WITH OUR C3I-1000D, AUDIO DELAY MODULE.
- SOON-TO-BE-RELEASED: THE C3I-1000DVR, DIGITAL VOICE RECORDER; AND, OUR C3I-1000SQ, SIGNAL QUALITY VERIFIER. DETAILS WILL FOLLOW.
- YOUR CONTROLLER WILL INSTALL WITH EASE IN OUR CUSTOM FABRICATED RM-1000 EMI ENCLOSURE, COMPLETE WITH POWER SUPPLY AND SPACE FOR OTHER OPTIONS. THE RM-1000 IS AVAILABLE NOW FOR EITHER CAT-300, 700 AND CAT-1000 REPEATER CONTROLLERS, OR ANY OTHER CONTROLLER MOTHERBOARD!
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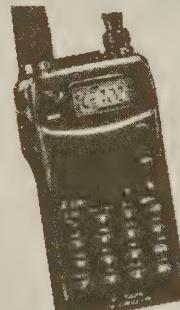
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## Regional Directory of Amateur Radio Clubs

### Special pull-out section

On the following eight pages you will find information about most of the regional amateur radio clubs in the Washington/Baltimore area. These clubs are all contributors to *Auto Call* magazine and have had club columns published during the past year. For each club, meeting dates and locations, mailing addresses (when known), and telephone numbers for obtaining additional information about each club is listed. We plan to make this an annual feature of *Auto Call*. If your club would like to be included in next year's directory, please submit your club information to the Editor not later than Nov. 1st, 1997. If your club has a logo, be sure to submit that too! Send any corrections to this year's listing to the Editor.



**Amateur Radio  
Research and  
Development  
Corporation**

**Meetings:** 2nd Thursday, 7:30 PM at Dolley Madison Library, McLean, VA.  
**Mail:** PO Drawer 6148, McLean, VA 22106-6148.  
**Information:** (703) 849-1161.



**AMSAT - The  
Radio Amateur  
Satellite  
Corporation**

**Local Meetings:** Semiannual in Spring and Fall.  
**Information:** AMSAT Area Coordinator: Pat Kilroy, WD8LAQ.  
**Contact by e-mail:** wd8laq@amsat.org



**Anne Arundel  
Radio Club**

**Meetings:** 1st/3rd Thursdays, Davidsonville Family Recreation Center, Davidsonville, MD.  
**Mail:** P.O. Box 308, Davidsonville, MD 21035.  
**Information:** (410) 923-0229.



## Antietam Radio Association

**Meetings:** First and Third Tuesday, 8 p.m., Regional Airport, Hagerstown, Maryland.  
**Mail:** P.O. Box 52, Hagerstown, MD. 21741  
**Information:** (301) 582-2984



## Alexandria Radio Club

**Meetings:** Second Friday of each month, 8:00 PM at the American Red Cross Bldg., 123 N. Alfred St., Alexandria, VA.  
**Information:** Harry Jones, N4CWP, (703) 790-9613, N4CWP@AOL.com.



## Arlington Amateur Radio Club

**Meetings:** Third Tuesday of each month, 7:30 P.M., Red Cross building, 4333 Arlington Blvd., Arlington, VA. Nonmembers welcome!  
**Information:** Mike Callahan, NW3V (703) 241-5618.



## Baltimore Amateur Radio Club

**Meetings:** 1st/3rd Wednesdays, Towson Presbyterian Church, Towson, Md..  
**Mail:** BARC, Inc., P.O. BOX 120, Reisterstown MD 21136  
**Information:** (410) HAMTALK



## Capital City Amateur Radio Society

**Meetings:** 3rd Saturday at the Woodridge Public Library, Washington, D.C.  
**Mail:** CCARS, 1719 Franklin Street, N.E. Washington, DC 20018-2033.  
**Information:** (202) 526-1329.



## Carroll County Amateur Radio Emergency Team & Radio Club

**Meetings:** Second Monday and last Wednesday at the EOC in Westminster.  
**Mail:** Carroll County Amateur Radio Club P.O. Box 2099, Westminster, MD 21158.



## Central Maryland Amateur Radio Club

**Meetings:** 4th Friday at the Doctors Community Hospital, Lanham, MD  
**Mail:** CMARC, P. O. Box 788, Greenbelt, MD 20768-0788.  
**Information:** (301) 552-0012.



## Chaverim of Greater Washington

**Meetings:** Periodically at the Jewish Community Center in Rockville, Maryland.  
**Mail:** Chaverim Of Greater Washington, Inc.  
6125 Montrose Rd., Rockville, MD 20852  
**Information:** (301) 942-6021.



## Columbia Amateur Radio Association

**Meetings:** 4th Tuesday at 7:30 p.m., Bethany United Methodist Church, Ellicott City.  
**Mailing:** P.O. Box 911, Columbia, MD 21044  
**Information:** Larry Russo, Pres - K3TFU, (301)725-2840.



## Digital Mid-Atlantic Radio Council

**Meetings:** Quarterly (locations TBA).  
**Mailing:** P.O. Box 73, Accokeek, MD 20607.



## The Dulles Amateur Radio Group

**On-the-air meeting:** Tuesdays at 8:00 p.m. on the Herndon repeater  
**Mailing:** Dulles Amateur Radio Group, P.O. Box 5073, Herndon, VA 22070-1964  
**Information:** (703) 922-3188



## Explorer Post 80

**Meetings:** Second and Fourth Wednesday of each month 7:30 PM at the First Christian Church, 2723 King Street, Alexandria, VA 22302:  
**Information:** Demi Pulas (703)820-2534



## Fauquier Amateur Radio Association

**Meetings:** 7:30 p.m., 2nd Tuesday Shadow Lawn Recreation Center, Warrenton VA.  
**Information:** Don, WY2V, (540)347-5745 or Larry, K4LLQ (540)347-7609. FARA, PO Box 752, Warrenton VA 20186.



## Frederick Amateur Radio Club

**Meetings:** 7 PM on the second Tuesday on each month at the Frederick County EOC on Montevue Lane in Frederick. Please call our Sound Source phone number for the latest info at (301) 695-2633 and use code 6393.



**Goddard  
Amateur  
Radio Club, Inc.**

**Meetings:** Third Wednesday at 5:00 p.m. at the Goddard Amateur Radio Club station, Soil Conservation Road, Greenbelt, MD,  
**Information:** Jim Blackwell, (301) 286-4534; Vikki Gigante-Hueber, (301) 249-2609.



**Green Mountain  
Repeater  
Association**

**Meetings:** Board of Directors, Last Monday of each month.  
**Mail:** P.O. Box 523, Bowie, MD 20718-0523.  
**Information:** John Williams, N5SJZ, (301) 805-5761.



**Hanover Area  
Hamming  
Association**

**Meetings:** Second Tuesday of the month at the Alesia Free Methodist church in Alesia, MD (Just outside of Manchester).  
**Mail:** Hanover Area Hamming Association, P.O. Box 381, Manchester MD, 21102.



**Historical  
Electronics  
Museum Amateur  
Radio Club**

**Meetings:** Second Wednesday, Historical Electronics Museum, Linthicum, Maryland.  
**Mail:** P.O. Box 746, Mail Stop 4015, Baltimore , MD 21203.  
**Information:** Gary Ryan, (410) 969-0410.



**Laurel Amateur  
Radio Club**  
A Volunteer Examiner  
Coordinator

**Meetings:** 4th Wednesday 7:30pm at 384 Main Street, Laurel Md.  
**Mail:** P. O. Box 3039, Laurel, MD 20709-0039  
**Information:** Jim/WI3N (301)725-6829 or Pud/W3YD (301)498-6293.



**Loudoun  
Amateur  
Radio Group**

**Meetings:** Third Saturday of each month; 8:00 a.m. Call for meeting place information.  
**Mail:** Loudoun Amateur Radio Group, P.O. Box 1004, Purcellville, VA 22132  
**Information:** (540)822-5690.



**The Maryland  
Apple Dumpling  
Radio Amateur  
Society, Inc.**

**Meetings:** 2nd and 4th Thursdays - 7:00 P.M. NBC Building - WKYS Conference Room, 4001 Nebraska Avenue, Washington, DC.  
**Mailing:** P. O. Box 2468, Wheaton, MD 20902  
**Information:** (301) 984-6113.



## The Maryland Mobileers Amateur Radio Club

**Meetings:** First Friday at the AA Co. EOC, Crownsville State Hospital, Crownsville, Md.  
**Mail:** MMARC, P.O. Box 935, Severn, Md. 21144  
**Information:** (410) 987-2384.



## Maryland Emergency Phone Net

**Meetings:** Nightly, 1800 Local, 3920 kHz  
**Directors:** WA1QAA, W3DQI, K3ONU, NF3X (Alternate).  
**Manager:** K3ORW; **Secretary:** WA3YLO;  
**Treasurer:** KC3U



## Metropolitan Communications Network Radio Club, Inc.

**Meetings:** Quarterly, 2nd Sundays.  
**Mail:** Mary A. Milligan, KA1KWP, 6608 N. 18th St., Arlington, VA 22205-1802.  
**Information:** Mary A. Milligan, KA1KWP (703) 533-0650



## Metrovision Amateur TV Club

Fast Scan Color ATV

**Meetings:** Quarterly: Time and place TBD.  
**Mail:** Metrovision, Inc., 3422 Silver Maple Place, Falls Church, VA 22042.  
**Information:** Sam, (301) 430-3373. Tom, (540) 752-2100. Rich, (301) 843-1253.



## The Mid-Atlantic DX and Repeater Association

**Meetings:** 2nd Thurs. rotating at Hagerstown, Frederick, Martinsburg, & Greencastle.  
**Mail:** 230 North Potomac St., Suite 2A, Hagerstown MD 21740  
**Information:** (301) 416-8435.



## Montgomery Amateur Radio Club

**Meetings:** 1st and 3rd Wednesdays Montgomery Co. Govt Center, Rockville, MD.  
**Mail:** MARC, P.O. Box 611, Gaithersburg, MD 20884-0611  
**Information:** Jeff - KZ3F (301) 258-0112



## Moose Amateur Radio Club

**Meetings:** 4th Wednesday of each month at the Towson Moose Lodge.  
**Mailing:** Moose Amateur Radio Club, 8801 Mylander Ln., Towson, MD 21286  
**Information:** Leave message (410) 823-9853



## Mount Vernon Amateur Radio Club

**Meetings:** 2nd Tuesday 8:30 p.m., Mt. Vernon Governmental Center, Alexandria, VA 22308.  
**Mail:** MVARC c/o Joe Salemi KR4CZ, P.O.Box 7234,Alexandria, VA 22307.  
**Information:** Chuck W3HSW, 703-660-6623.



## National Capitol DX Association

**Meetings:** Feb, Apr, Jun, Oct and Dec. at a member's home. Contact the Secretary (Rick Murphy, WA1SPT) for details.  
**Information:** Rick Murphy (703) 280-2637 or Leo Boberschmidt (301) 946-3738.



## Northern Virginia FM Association

**Meetings:** Fall, Winter & Spring.  
**Mail:** NVFMA, P.O. Box 486, McLean, VA 22101.  
**Information:** Ann Herlich, (703) 481-1458.



## North Point FM Association

**Meetings:** Second Saturday of every month - 10:00 am at Lord Fairfax Community College, Middletown, VA.  
**Mail:** P.O. Box 327, Stephens City, VA 22655  
**Info:** Michelle Cooley - (703) 869-5250



## Ole Virginia Hams Amateur Radio Club, Inc.

**Meetings:** 3rd Monday, 8:00pm, NOVEC Bldg., 10323 Lomond Dr., Manassas, Va.  
**Mailing address:** Ole Va Hams ARC, P.O. Box 1255 Manassas, Va. 22110.  
**Information:** (703)-369-6050.



## Potomac Valley Radio Club

**Meetings:** Virginia site: Marshall High School, Route 7, near Tyson's Corner. Maryland site at the Church of the Nativity, Temple Hills, Maryland (near Andrews AFB).  
**Information:** Rich Boyd, (301) 464-8014.



## Prince George's Wireless Association

**Meetings:** First working Tuesday 7:30 PM;  
American Red Cross., Hyattsville, MD 20782  
**Mail:** 4109 Kennedy St., Hyattsville, MD 20781  
**Information:** Frank Holton (301) 927-1245.



**Quarter Century  
Wireless Assn.  
Chapter #91**

**Meetings:** Neighbor's Restaurant, Vienna, VA; third Saturdays; Noon.

**Information:** Dick Rucker (KM4ML), Secretary; 10426 Darby St., Fairfax, VA 22030-3603; 703-591-3279.



**Quarter Century  
Wireless Assn.  
Shenandoah Valley  
Chapter #137**

**Meetings:** 3rd Wed. of odd months, 12:30 PM; Carper's Valley Golf Club, Winchester, VA.

**Mailing Address:** 225 Milam Drive, Winchester, VA, 22602.

**Information:** Perry Crabill, (540) 662-7526.



**St. Mary's County  
Amateur Radio  
Association**

**Meetings:** Fourth Thursday of each month, 7:30 PM, at the Lexington Park library.

**Mail:** SMCARA, P.O. Box 743, California, Maryland 20619.



**Shenandoah  
Valley Amateur  
Radio Club**

**Meetings:** First and Third Friday of every month at 7:30 p.m. SVARC Club House 2921 Grace Street, Winchester, Virginia.

**Mail:** P.O. Box 139 Winchester, 22604.

**Information:** Irvin Barb, W4DHU, 955-1745.



**Southern  
Maryland  
Amateur Radio  
Club**

**Meetings:** 2nd Friday of each month at 1930 ET at the PG County Police, Clinton Station, 6707 Groverton Drive, Clinton, Maryland.

**Mail:** P.O. Box 273, Cheltenham, Md, 20623

**Information:** Vic & Linda (301) 888-1388.



**Southern Patuxent  
Amateur  
Radio Club**

**Meetings:** Second Wed. each month at 8:00 pm. Southern Community Center, Lusby, MD.

**Mail:** PO Box 399, St. Leonard MD 20685

**Information:** Steve Franc (301) 373-3605.



**Sterling Park  
Amateur Radio  
Club**

**Meetings:** 8:00 P.M. - Third Monday of the month except July and August at Sterling Community Center Annex, Sterling, VA.

**Mail:** Call Box 599, Sterling, VA 20167.

**Information:** Bill Lorentz, (703) 444-6341.



**T-MARC**  
**The Middle Atlantic**  
**FM and Repeater**  
**Council, Inc.**

**Meetings:** Last Monday of month, 19:30, Prince George's County EOC.  
**Address:** P.O. Box 1022, Savage, Md. 20763-1022 for all correspondence.  
**Information:** Owen Wormser (703)684-7682.



**Valley**  
**Amateur**  
**Television Society**

**Meetings:** V.A.T.S. Meets the 2nd Thursday of each month. Time: 7:30 PM. Place - Amateur Radio of Hagerstown, 17561 York Road, Hagerstown, MD.  
**Information:** Contact any club officer.



**Vienna**  
**Wireless**  
**Society**

**Meetings:** 7:30pm second and fourth Fridays of the month at the Vienna Community Center.  
**Mail:** P.O. Box 418 Vienna, VA. 22183.  
**Information:** Paul, AB4CY, (703) 560-2779



Voice of America

**Voice of America**  
**Amateur Radio Club**

**Meetings:** 2nd Friday at noon in Room 7239B, Wilbur J. Cohen Building, 330 Independence Ave SW., Washington, DC.  
**Repeater:** K3VOA (146.34 MHz Input, 146.94 MHz Output).



**Waldorf**  
**Repeater Support**  
**Group, Inc.**

**Meetings:** Board of Directors, Monthly. Membership, Informally, as needed.  
**Mail:** P.O. Box 1774; White Plains, MD 20695.  
**Information:** Chris O'Brien (301) 888-1100, Chip Fetrow (703) 406-3130.



**Washington**  
**Adventist Amateur**  
**Radio Association**

**Meetings:** Last Sunday, 4:00 pm, Sligo SDA Church Office Building, Takoma Park, MD.  
**Mail:** c/o Henry C. Miller, P. O. Box 331, Greenbelt, MD 20768.  
**Information:** Henry Miller, (301) 474-7376



**Woodbridge**  
**Wireless,**  
**Inc.**

**Meetings:** Second Tuesday of each month at Springwoods and Chaucer, Lake Ridge, VA.  
**Mail:** PO Box 112, Woodbridge, VA 22194  
**Information:** Jim Stearns, KC4ZHQ (703) 670-3480.



## Antietam Radio Association

**Meetings:** First and Third Tuesday of the month at 8 p.m. in the Conference Room at the Washington County Regional Airport, Showalter Road, Hagerstown, Maryland.

**Mailing Address:** P.O. Box 52, Hagerstown, MD. 21741

**Nets:** Tuesday 7 p.m. 146.940 MHz.; Wednesday 7 p.m. 447.975 MHz.; Thursday 7 p.m. 147.090 MHz.

**Repeaters:** 147.09+ and 146.94 -.

**Information:** Donnie Sue Mulligan/  
KB3AOO (301) 582-2984

An estimated 100,000 people turned out for the 72nd Annual Alsatia Mummers' Parade on Saturday, November 2nd, according to Marvin House, Alsatia's parade chairman. There were clowns, dozens of bands, a ghoul carrying a live woman's head, lots of floats. It was a bit cold, about 38 degrees, and kept the spectators bundled up, sipping coffee and hot chocolate to keep warm.

Some of the members of the ARA were there, communicating, as we have in the past years. Gary Swales/N3VDU, the Activities Manager, assisted and organized our participation with the Alsatia Club, Page Pyne/WA3EOP was doing his usual best as Net Control, Joe Elliot/K3LLP was stationed at St. Maria Goretti High School, Bill Harclerode/ N8UKC communicated from N. Potomac/Oak Hill, Carlo/K3ABH and Larry Belella/N3QBK were at the City Public Parking Garage, Tim Keener/N3VGS was at Potomac/ Antletam St., Bob Long communicated from Bester School, and Doug Lunde/WA4IBY was standing by at his home QTH with a telephone. THANKS to those who helped...

Gail Ottinger, Director of Emergency, Washington County Chapter of the Red Cross, attended our meeting on November 5, and talked to the few that were there about volunteering. She

said we could take classes taught by Gail. Charlie Mulligan/ N3MVR and I are going to the classes and learn what we can about the Red Cross. I will let you know how the classes are going and maybe someone else will volunteer. Gail said all we have to do is stay home at a time we say we can, take phone messages and call the Red Cross with THAT message. It seemed like a good way to spend a day or two a month.

I went to a seminar November 14 at Hagerstown Junior College on newspaper reporting. The Editor and Publisher, John League, of the Hagerstown morning/evening/and weekend newspapers...THE HERALD-MAIL/THE MORNING HERALD and THE DAILY MAIL...gave a short speech. There were four editors that gave us a little bit to think about, then Mr. League asked if there were any questions. We were there for two hours. Mr. League wants to start these seminars up again for at least twice, and maybe up to four times, a year. It would be fantastic for all of the PIOs to go to the seminar. I truly enjoyed the evening, got to meet the Lifestyle editor, Lisa Prejean, and understand better why, who, how, what, and where the editors get their reports!

The 34th Annual JFK 50-Mile Ultramarathon brought about 760 runners from all over the world to Boonsboro High School at 7 a.m., November 23. They were to finish at Springfield Middle School in Williamsport, MD. in less than 14 hours. Michael Harrison, a resident of Virginia Beach, VA. won on his first attempt when he crossed the finish line just under 6 hours. The following ARA members/other HAMS were there to communicate: Bob Knibb/K5ME, Don Jones/KB8WHW, and Gary Swales/N3VDU are to be congratulated on Net Control(Thanks!), Bill Harclerode/N8UKC rode around and answered the calls in situations we couldn't accomplish without him (Thanks!).

Charlie Anderson/NF3X with Mike Spinnler and Roger Davis/ W3LM doing their thing as Race Control(Thanks!), Russ Plante/N3KKW, the police in action (Thanks!), Stan Klick/ W3YGC as sweeper (Thanks for helping the woman on the

C&O Canal who needed an ambulance, plus all the other things you did, you covered her with an thermal blanket...), Lauren/N3RTJ, Larry Belella/N3QBK, Joe Elliot/K3LLP, Bob Long/KD3JK, Gene Sigler/N3MZB, Carlo Belella/K3ABH, Ted Lawhead/WA3AAT, Tina Jones/KB8ZQM, Don Eisenhart/WB3FTQ, Charlie Mulligan/ N3MVR and Donnie Sue/KB3AOO. Thanks to all and if I forgot to mention you, let me know. This ultramarathon is one of the biggest things we do.

By the time you read this, our 1996 Christmas Banquet will be history...will let you know about that the next time.

73, Donnie Sue/KB3AOO



## Central Maryland Amateur Radio Club

**Meetings:** 4th Friday of the month at 7:30pm, at the Doctors Community Hospital, 8118 Good Luck Road, Lanham, MD (no meeting in December). Enter in the Outpatient Testing entrance across from the Emergency Room entrance behind the main building. Take the elevator to the 5th floor and exit left, the meeting room (DSE Room) is on the right.

**Repeater:** N3EZD/R 145.230 MHz.

**Net:** Every Tuesday, 9:30pm, 145.230 MHz repeater.

**Mailing Address:** Central Maryland Amateur Radio Club, P. O. Box 788, Greenbelt, MD 20768-0788.

**Information:** Jim Tilton, Pres. - KD3JA, (301) 552-0012.)

at 7 p.m.. The Museum is located at West Nursery Road and Elkridge Landing Roads in Linthicum, MD about 30 minutes north of Greenbelt, MD just off the Baltimore-Washington Parkway (next to the BWI Marriott Hotel).

By the time you read this, CMARC will have celebrated the holidays with their annual dinner party, held this year at Three Brothers Pizza in Riverdale, MD. As usual, the gift exchange took the form of a "Chinese" auction conducted by our auctioneer extraordinaire, Tony/N3JWT.

Much of CMARC's November meeting was taken up by discussion of T-MARC's proposed coordination of a repeater, nominally located in Hagerstown, MD, on the same frequencies as the repeater operated by CMARC just outside of New Carrollton, MD. With conflicting information on the exact physical location of the repeater on South Mountain to the east of Hagerstown, CMARC is concerned about the interference potential of the repeater. The club authorized the club president, Jim/KD3JA, to write a letter of objection to the proposed coordination on behalf of the club.

73 de Jim/KD3JA



## The Dulles Amateur Radio Group

**On-the-air meeting:** Tuesdays at 8:00 p.m. on the Herndon repeater

**Repeater:** N4FSC, 145.310 (Herndon)

**Mailing:** Dulles Amateur Radio Group, P.O. Box 5073, Herndon, VA 22070-1964

**Information:** Mike Webber, WB8RDN, 703-922-3188

CMARC's regular January meeting, at 7:30 p.m. on January 24th, will be held at the Historical Electronics Museum instead of its usual location at Doctors Community Hospital. The club will tour the Museum after an abbreviated business meeting held at the Museum. Car pools will leave the Doctors Community Hospital rear parking lot

There are big changes in the Herndon Repeater Group. First, we've changed our name to the Dulles Amateur Radio Group to better describe our wide range of interests and activities. Our Board of Directors now includes Mike, WB8RDN, Marcia, KD4ITP, Mark, KR4FH, Mike, KD4ITN, Bill,

N4WJN, Tom, WB8ZRP, Don, KD4CHU, Gary, KD4SRX, Bill, W3EMH, and yours truly Mike, N4PDY.

Our weekly information net is moving to Tuesdays at 8 p.m. to better accommodate everyone's busy schedule. All amateurs are warmly invited to check in and participate.

Yearly dues for the DARG will remain at \$20, including autopatch access. However, membership will now also include a paid subscription to Auto-Call; a new subscription for non-subscribers, or an extension if you already get Auto-Call. This will help DARG members keep in touch with the entire ham community in the greater DC area.

Several new activities are planned. In a joint project with the Sterling Park Amateur Radio Club (SPARC), DARG and SPARC will co-sponsor a seminar for the public about Amateur Radio. This seminar will be on Saturday, 14 December 1996 from 2 - 4 p.m. at the Eastern Loudoun Regional Library, meeting room "C". This introduction to the hobby will serve as a lead-in to SPARC's license training class planned for January. DARG will also assist SPARC by holding an exam session in March, 1997 at the end of the SPARC class.

DARG will sponsor a "Skywarn" training class on Saturday, 11 January 1997 at the Eastern Loudoun Regional Library from 1-4 p.m.. This class will train observers in the proper technique for reporting severe weather to the Skywarn net. 25 participants are needed for the session; please participate if you can. Family members, friends and neighbors are welcome; they need not be hams.

Several technical seminars are planned for 1997, starting with "The Internet", hosted by Mark, KR4FH. Mark works for UUNet, so you'll be getting it right from the horse's mouth. The date for this seminar will be announced on the weekly net.

Our 1996 Holiday party and raffle will be held on Saturday, 14 December 1996 from 6-9 p.m. at

the St. Matthew's Episcopal church in Sterling. As in past years, there will be a raffle, with tickets at \$5 each. This year's top prize will be a new Yaesu dual-band HT. Other prizes will include a KPC-3 TNC, a mobile antenna, books, and other ham-related prizes. A total of over \$500 in prizes will be raffled off.

A club "homecoming" social event is planned for Spring 1997 to welcome amateurs who have not been active in the organization in recent years, and to encourage participation and support of all as we build the DARG.

DARG will once a year, on the first Saturday of March, hold an annual membership meeting. The 1997 meeting will be at the Eastern Loudoun Regional Library the afternoon of 1 March 1997. The exact time will be announced on the weekly net.

Don, KD4CHU has volunteered to head up Field Day 1997. It's not too early to plan for it. We have a great time every year, so plan on joining us to operate, or just bring the family and have a good time. There's lots to see and do, and lots of good food and soft drinks.

DARG will sponsor license exam sessions on the following dates: 1 March 1997, 16 August 1997, and 8 November 1997, on Saturday mornings. Exact times and places will be announced on the weekly net.

That's it for this month. Stay tuned for more developments, as the Dulles Amateur Radio Group grows to meet the challenge of ham radio in the 90's, and the 21st century.

73, de Mike, N4PDY

Reminder - all submissions for

 **Auto Call** FOUNDATION FOR AMATEUR RADIO

are due no later than  
the 1st of the month prior to the  
month of publication!!



## Fauquier Amateur Radio Association

**Meeting:** 7:30 p.m., 2nd Tuesday of the month except July, August and December. Shadow Lawn Recreation Center, Warrenton VA.

**Breakfast:** Last Saturday of the month at Western Sizzlin Warrenton VA 7:30 - 9:00 a.m.

**Net:** Every Wednesday, 9:00 p.m., 147.165 Mhz NZ4N Repeater.

**Packet:** KE4YVU FARA7 node 145.070 Mhz with direct connect to FBBS9

FBBS9 Bulletin Board 145.090 Mhz,  
FARA9 node 145.090 Mhz.

**Repeater:** NZ4N/R 147.165 Mhz (+.600 Mhz)

**Newsletter:** TOROID, Monthly. Deadline for submissions: 20th of the month.

**Information:** Don, WY2V, (540)347-5745 or Larry, K4LLQ (540)347-7609. FARA, PO Box 752, Warrenton VA 20186.

**Next meeting:** January 14.

### Officers Elected for 1997

Congratulations to the new club officers:

**President:** Chuck Gould, N4YXW

**Vice President:** Ray Almond, W4VOO

**Secretary:** Neil Spokes, AB4YK

**Treasurer:** George Murphy, WD4KOJ

**Program Chairperson:** Shiela Day, KE4USU

Welcome to new club members: Jack AD4SA, Eleanor KE4YXQ and Phil KF4NBP.

A special thanks to Neil, AB4YK for his leadership at the successful November 7 exam session. Thanks to all those who helped administer the test too.

From outgoing club president Larry Walker: "I want to take this opportunity to thank all the many people that made my year as your President, fun and full of a spirit of cooperation and

teamwork. Without that teamwork, the accomplishments of the year would have been few and far between. With that teamwork, the accomplishments have been very significant and we are in good shape financially. I will not go into detail on the many accomplishments or the many people that helped or the few that helped a lot. Just —Thanks to all!"

1996 was a pretty good year for the club; new antenna, new tower location, great Field Day, lots of new members, two successful New Ham classes & Exams, upgraded packet BBS, electronic newsletter, ARES support to the blizzard relief (among others)....lot's to be thankful for. Thanks to all who make it possible. Here's looking forward to a HAPPY NEW YEAR!!

73, Mark, KD6AKC



## Green Mountain Repeater Association

**Meetings:** Board of Directors, Last Monday of each month.

**Repeaters:** KD3VR-146.61 (Cheverly), K3GXF-146.88 (Greenbelt).

**Luncheon:** First Saturday of each month at the Fountain Cafe, in the Laurel Shopping Center Mall, US Route 1 (Baltimore Ave.) and Cherry Lane. Starts at 11:30 AM. Monitor 146.88 for Talk-In.

**Nets:** Old Gents Net meets on 146.88 each day at 9:30 A.M. and 6:30 P.M. Washington Adventist Amateur Radio Association Net meets on 146.88 each Thursday at 9:30 P.M.

**Mail:** P.O. Box 523, Bowie, MD 20718-0523.

**Information:** John Williams, N5SJZ, (301) 805-5761.

GMRA held a monthly Board of Director's and Control Operator's meeting on Monday October 27, 1996 at the home of C.T., K3GXF and Sue, N3RWI. As usual the meeting went well along with

officer reports and handouts of the previous meeting minutes and financial statements.

C.T., K3GXF, Secretary, does a fantastic job in the recording and printouts of the minutes each month. John, N5SJZ, Treasurer does an equally great job in the GMRA financial and membership reports and printouts.

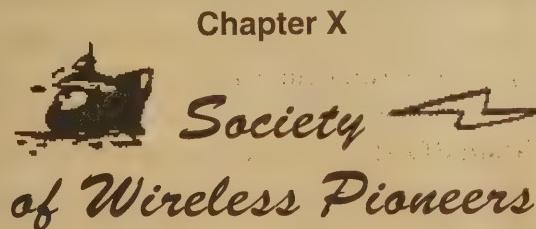
Joe, KD3VR, President, runs a well structured and disciplined meeting. Also thanks to the rest of the Board for their much needed input. Another thanks to C.T. and Sue for their hospitality.

The monthly luncheon at the Laurel Center Mall on Saturday, November 2nd showed another good turnout of members and guests numbering approximately 34.

John, N5SJZ, and Debby, N5SKA, published the second 8 page GMRA newsletter which was mailed out the second week of November. What a fantastic job they did which included articles written by Murray Green, K3BEQ, the rounding patriarch of GMRA.

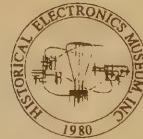
The 146.61 repeater was shut down on Saturday November 16, 1996 for some maintenance work and was back on the air on Sunday. Happy New Year.

Ken Easton, N3HLY



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For Information Call  
(703) 536-9537



## Historical Electronics Museum Amateur Radio Club

**Meetings:** Second Wednesday of each month, 5:30 PM, In the Historical Electronics Museum, West Nursery Road and Elkridge Landing Roads. Linthicum, Maryland (Next to BWI Marriott Hotel).

**Net:** Monday 8:00 PM, 146.67(-)/224.24(-) MHz (courtesy of BARC).

**Information:** Gary Ryan, (410) 969-0410.

**Mail:** P.O. Box 746, Mail Stop 4015, Baltimore, MD 21203.

**Street address:** 1745 W. Nursery Rd., Linthicum, MD 21090.

## NOTICE OF SPECIAL TRAINING CLASS

HEMARC has formed an Amateur Radio Technical Training/Elmering Committee. The committee's goal is to utilize the resources of HEMARC and the Museum to provide hands on training in building, assembling, and operating electronic equipment safely and reliably. Techniques for soldering, wiring, assembling, cable making etc. are to be covered. The first class is tentatively scheduled to begin mid January 1997. They will be held at the Museum. If any amateur or club is interested in this activity, please call the committee chairman Ray Robley, KD3KK at 410-859-0798. Suggestions and input would be much appreciated.

The intent of this class is to bridge the gap between the necessary knowledge required to become licensed and the how-to knowledge required to safely build and operate ham gear.

## November Meeting - The Law and Amateur Radio

The highlight of the November meeting was an excellent presentation by Chris Imlay, K3KD, the

General Counsel for the ARRL. Chris discussed the Little LEO threat to 2M and 70 cm and the general thrust to use amateur frequencies in the present governmental climate. He also covered the status of the regulations on amateur certification of radiation density as well as the legal aspects of antenna restrictions and telephone RFI. The clear and straight forward information on these complex and important issues was much appreciated by all.

### Noisy Old Teletype Machines

A pair of teletype machines of the WW2 era have been put in working order by Roy Heck, W3KU and Rol Anders K3RA. With a little more finish restoration it will be ready for installation as an fascinating exhibit.

### Volunteers Needed

The Museum needs all kinds of volunteers to help restore old electronics equipment and work on displays. Woodworking and wood finishing are particularly needed as well as to scrape paint and do general electronics work. Call Gary Ryan, W3GMY at 410-969-0410.

73 de Chip, W4PBG



### Laurel Amateur Radio Club

A Volunteer Examiner Coordinator

**Meetings:** 4th Wednesday of each month (except November & December) 7:30pm at 384 Main Street, Laurel Md.

**Social:** 2nd Wednesday of each month, except December (Call for directions).

**Nets:** 1st & 3rd & 5th Wednesdays, 8:30pm, on 147.225+, no tone.

**Mail:** P. O. Box 3039, Laurel, MD 20709-0039

**Exams:** 3rd Saturday of each month, to pre-register contact: John/WB3GXW (301) 572-5124 after 6 P.M.

**Information:** Jim/WI3N (301)725-6829 or Pud/W3YD (301)498-6293.

### END OF AN ERA !

After five years of dedicated service to the Laurel Amateur Radio Club, Jim/WI3N and Pud/W3YD (note the new callsign), respectively, have retired as President and Treasurer of the club. Fortunately for the club, they're not leaving, but just taking a well deserved rest from the leadership. Jim and Pud will continue to be active in many of the club's public service events, antenna raising parties, contests, and social activities. They have set some high standards for the new leadership to follow. THANKS again, to them both, for their many years of service.

### UP and DOWN THE BANDS

The club's score in the annual ARRL November Sweepstakes on 16-17 Nov, was on the down side this year. As usual, operating from a "field site", we used the "bucket truck" from a local car dealership to hoist the beam antenna up into its operating position. We also put up the G5RV antenna for the low bands, using the bucket truck as the center pole for the antenna. It all worked well....except we just didn't seem to have the punch this year in making those hard-to-get contacts. We only missed a "clean sweep" by five sections (we got 72 out of 77). Oh well....next year, with the increase in the sun spots.....we're bound to make a clean sweep!

December's activities have included the Laurel Main Street Christmas Tree Lighting, the Holiday Banquet, the D.C. Roadrunners Marathon, the county ARES/RACES meetings, and the routine "odd" Wednesday night net on the 147.225 MHz repeater. Isn't it time for a break! Nawww....we like it this way!

The Laurel VE team, led by John/WB3GXW, continues to conduct monthly test sessions on the 3rd Saturday of each month at the club house (384 Main Street), which is the Women's Club of Laurel facility. On the average, about 25 individuals are given exams each month to obtain their initial ham license, or to upgrade their license. All Laurel VEC exams are FREE! The next testing session will

be on Saturday, 18 January 1997.

THAT'S IT....we're into the new year!  
HAPPY NEW YEAR!

73 Roger/W3LM



### The Maryland Mobileers Amateur Radio Club

**Meetings:** First Friday of each month at the AA Co. EOC, Crownsville State Hospital grounds Crownsville, Md.

**Repeaters:** WA3PJQ - 146.805 & 449.125 both in Millersville, Md. W3VPR - 442.3 in Annapolis - Joint usage AARC.

**Social Breakfasts:** 15 days (3 Saturdays) after club mtg, at Rick's Cafe in Odenton at 9 AM.

**Mailing:** MMARC, P.O. Box 935, Severn, Md. 21144

**Nets:** 2-Meter on 146.805 @ 20:30 local time every Monday, 10-Meter CW practice net @ 19:00 Monday on 28.230 MHz.

**Information:** Brian Fitzpatrick, N3QXW (President). Bill Ziegler KA6TYY (410) 987-2384.

### MMARC's POST HOLIDAY SWAPFEST

The Mobileers are starting the year off with a POST HOLIDAY SWAPFEST & FLEAMARKET being held on January 26th. It will be from 0800 - 1400 and be held at the Odenton's Volunteer Fire Department Hall located at 1425 Annapolis Road (RT. 175) in Odenton, Maryland. Talk-in will be on the club's repeater 146.805 MHz.

Yes, it's not the largest hamfest around, but it's a perfect way to start off Super Bowl Sunday!!! There is a wide variety of vendors and you never know when you will come across that GREAT BARGAIN that you have to buy!!! So we hope to see you all there.

### MMARC'S REPEATERS & NETS

I thought I would talk a little bit about the repeaters and nets the MMARC run. That way if you are in the area, or looking for a net to check into, give us try.

#### REPEATERS

**2 METERS** - 146.805 Mhz out/146.205 Mhz in WA3PJQ. Our two meter repeater is located at the Anne Arundel County Headquarters Fire & Police Station located in Millersville. This about 1.5 miles North of where I-97 & Rt 32 join. The antenna is located at the 150 feet mark on the SW side of the county's tower. The repeater does have auto-patch, but even 911 requires the club's access code to use. The repeater is used mostly in the early morning and evening by the commuters. They usually are in a round robin QSO, so don't hesitate to give your call and join in after being recognized.

**UHF** - 449.125 Mhz out/146.205 Mhz in WA3PJQ. The clubs 440 repeater is located at the same location as the 2-mtr. It is 150 feet up and located on the tower's SW side. It has fair coverage. There is also autopatch on this repeater.

**UHF** - 442.300 Mhz out/146.205 Mhz in W3VPR. This 440 repeater is a Joint usage repeater with the MMARC and the Anne Arundel ARC. It is located in Annapolis near the intersection of I-97 and Rt 50. The antenna is located 150 feet up on the SW side of the tower. There is no auto-patch.

#### NETS

**ARES NET:** The Anne Arundel County Amateur Radio Emergency Service Net is held each Sunday night at 2000 Hours on the 146.805 Mhz repeater. The purpose of this net is to provide information and training in emergency communications, including traffic handling. All appropriately licensed amateurs are invited to participate in this net. You do not have to be an ARES member to check-in.

## MMARC TRAFFIC AND INFORMATION

**NET:** The MMARC's Traffic and information net is held each Monday night at 2030 hours on the 146.805 Mhz repeater. This net is open to all amateur radio operators and not just members of the MMARC.

**UHF NET:** Robert, N3POX, holds a net each Wednesday at 2000 hours on the W3VPR 442.3 Mhz repeater.

**CW PRACTICE NET:** The Maryland Mobileers ARC usually holds a very informal CW Practice Net on Mondays at 1900 hours on 28.230 Mhz. Don't worry about your code speed. That is what the net is all about. Just send to the net control the speed you want to copy at and they will hold a short QSO with you and who ever else joins in.

The Anne Arundel ARC located in Davidsonville has several repeaters also that cover the Glen Burnie/Annapolis Area, you may want to look up their frequencies and Nets.

That's it for this month. Please note our club meeting, breakfast and net times. We would be happy to meet you and share some good "Ham Stories"!!

Don't Hesitate to use our repeater if you are in our area.

73, Bill, KA6TYY

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**Metrovision  
Amateur TV Club**  
Fast Scan Color ATV

**Meetings:** Quarterly: Time and place TBD.

**Repeater:** WA9GVK/4 (video/audio) Input: 425-431 Mhz. Output: 438-444 Mhz. Accessible 144.970 Simplex FM Voice.

**On-the-air:** Sundays and Wed. 8:00 P.M.

**Mailing:** Metrovision, Inc., 3422 Silver Maple Place, Falls Church, VA 22042.

**Information:** Sam - N3GHY (301 430-3373)

Jim - KA4CKI (703494-342)

Tom - KO4OX (540-752-2100)

Rich - KA3BTD (301-843-1253)

Our net have been going strong with plenty of check-ins. Burnie WD40 is now W3SW. Burnie, like so many others, applied for a new call sign in Gate 2 of the FCC call sign reallocation. Bob - KC3VO finally got his 70 cm antenna off ground level and put it on his tower. Now his picture is P5 into the repeater with lots of color. Of course Bob likes to run plenty of power which doesn't hurt either. Dave - W3PJM and his wife Ruth - K3AGR are back into the repeater as good as ever. Dave managed to climb their tower and reposition their 70 cm antenna. Dave isn't exactly a young buck and his wife Ruth was apprehensive about Dave climbing. But another success story. I have to say in general all pictures have improved.

Did you see the ATV articles in QST for the ATV transmitter and receive down converter a few issues ago? It seems like everyone is getting on the band wagon. The electronic magazines, whole sale catalogs and hamfest vendors are selling ATV kits or prebuilt transceivers. You can always operate simplex ATV with a good friend, who is also an amateur, as long as there is a good path between the both of you. Several of our ATV members have their VCR's connected to their transmitters and show us their summer vacations and or tapes on steam locomotives with full sound. You just have to be careful with copyright tapes.

To rebroadcast them without permission is a no no.

We all here at Metrovision hope everyone had a great Holiday Season. We are looking forward to the upcoming year. Should you need to contact us by mail please use the following address: METROVISION - 3422 Siver Maple Place, Falls Church, Va. 22042. We are no longer using the post office box.

"I'll be seeing you" - 73's Rich KA3BTD



### The Mid-Atlantic DX and Repeater Association

**Meetings:** Second Thursday of each month, rotating locations among Hagerstown MD, Frederick MD, Martinsburg WV and Greencastle PA.

**Net:** Tuesday evenings at 1930 local on 147.06.

**4 State 10M net:** Wednesdays at 2000 local on 28.315.

**Repeaters:** Frederick MD: 147.06, 224.20, 448.125; Martinsburg WV: 147.345.

**Mailing:** 230 North Potomac St., Suite 2A, Hagerstown MD 21740

**Information:** Voice BBS 301-416-8447 (info Box 112) LandLine BBS (301) 416-8435

Lots of repeater site activity has been the emphasized work leading up to this report. The 147.06 repeater is getting its antennas reworked and will soon be booming into the luminiferous aether with 40 watts vice 15. The controller for the 448.125 repeater was on the bench in early December but should be back on the air with new features in early January.

The Radio Sleuth team of Mike (WB8VBW), Chris (N3TIK) and others has checked out all the usual suspects looking for the noise source plaguing the 147.06 repeater. All components in the shack seem innocent, so the search is going on outside.

Work is still progressing on the Oakland site. It looks like the first MADRA repeater to go up at that location will be another 224.20 repeater. There's a chance it may be up as you read this.

Membership dues are rolling in/washing in/trickling in. If yours haven't joined the Great Financial Flood yet, please do send ASAP. A review: Members-\$20; Family-\$25; Student (under 18)-\$10. This year we're trying something new: Most MADRA members are getting their newsletters by e-mail. If you'd like us to use USPS for yours, please send an additional \$5 to cover postage. January action is centering on Frederick MD. Hal (W3HWC) is planning another class in radio theory and regs to be taught at the First Baptist Church (Dill at Benz Sts). The first session will take place Wednesday, January 15. Target 7:30 p.m. for that and Hal will shift time and day for later sessions as the students wish.

Welcome to 1997. Have you tested all your software yet to make sure you are ready for 2000? Me neither. Of course, this is written as December begins, so maybe we'll all get around to it.

Hopefully you are reading this as you reflect back on the grand time had by all at the MADRA Holiday Banquet at Olde South Mountain Inn. I say "hopefully" because writing this column brings with it a number of privileges; this year that included the privilege of paying the deposit for the banquet room.

Plan to meet with us for the January 9 club meeting. That will be 7:00 p.m. at the Red, Hot and Blue barbecue in Frederick. Then we get to Saturday January 18 for the next MADRA test session. This will take place at the First Baptist Church but you must make sure that you are pre-registered. This is an ARRL VEC Test session. Call the voice BBS at 301-473-4151, box 110 (our Frederick Line) or 301-416-8447 (our Hagerstown line) or send your information e-mail

<madraclub@aol.com.> We need your name, license class, and what elements you are taking along with your phone number and e-mail address. The deadline is Thursday, January 16th.

73 DE N2CSQ/3



## Mount Vernon Amateur Radio Club

**Meetings:** Second Tuesday of each month, 8:30 p.m.(except December) Mt. Vernon Governmental Center 2511 Parker's Lane, Alexandria, VA 22308.

**Nets:** Every Tuesday at 9:00 p.m. Starts on 2 meters then moves to 10 meters on 28.408.

**Repeater:** WD4PDP 146.055 input / 146.655 output.

**Mailing:** Mt. Vernon Amateur Radio Club(MVARC) c/o Joe Salemi KR4CZ, P.O.Box 7234,Alexandria, VA 22307.

**Information:** Chuck W3HSW, 703-660-6623.

Hope everyone had some good holidays and that '97 brings good things, not only in ham radio, but in everything in general.

The program for the November meeting featured a presentation by Mr. Joseph Boothe, a technician with Virginia power. He discussed a number of ham related topics including power transmission and interference hunting, as well as answering numerous questions from the audience.

The traditional monthly meeting wasn't held in December. Instead, Mount Vernon ARC had its annual Christmas party at the Old Country Buffet, south of Alexandria. Members gave new meaning to the phrase, "All you can eat". A good time was had by all. Thanks to the staff members who set up the event.

The program committee is working on a series of presentations for the upcoming year featuring

both guest speakers and members.

The Club wishes 73 and a bon voyage to Charlie, NN3V who departed for a new QTH in California after retiring from the Navy. Not only was he a long-time member, but he also served the amateur radio community as an Official Observer. Our area's loss is W6 land's gain. His job will be bringing him back to the DC area occasionally. Let's hope it's on a meeting night. Good luck in the new endeavor.

The FCC has started issuing the vanity callsigns. Leading off those in MVARC is Frank, formerly N4GUS, the local Emergency Coordinator whose new call is, appropriately, K4EC. Also in the new call category are Dick, K4UV, formerly AB4JX, and Marci, N4MK, who used to be KM4VM.

MVARC-sponsored Explorer Post 80 was one of the units participating in the annual Scouting For Food drive. The Post's collection activities were coordinated through the 146.655 repeater. WA4USB acted as primary net control. Other stations at fixed and mobile positions were KE4BAE, KD4CNS, K4BSA, KE4CKZ, KD4UPD, KE4POK and KE4JPA. Hats off to everyone in the drive, which collected several large truckloads of food for the area's needy.

Anyone interested in taking a licensing test through the MVARC VEC program should double check the testing location. It's possible that by the time this is printed testing MIGHT be resumed at Lee Park. Test location information is available in AutoCall, in the Club's newsletter, at the monthly meeting, or on the weekly net on Tuesday (now at 8:30 PM, or 2030 on the 24 hour clock).

The 146.655 repeater was acting up again towards the end of November. The problem appears to be in the receive function and is being investigated by the repeater committee. This type of problem points out the need for an understanding of simplex operations and of the need to have an antenna that's better than a rubber duck. A J-pole made from some 300 ohm TV lead-in wire is a

valuable addition to your station's inventory. The J-pole can be built in twenty minutes for only about three dollars (much less if junk box parts are used.) Construction information can be requested at the meetings or on the weekly net. Try it in place of a duck or even a quarter wave whip. You'll be pleasantly surprised.

Don't forget the special event operation at Mount Vernon on George Washington's birthday. Come down and operate. Non-ham visitors are welcome, too.

73 de Chuck, W3HSW



## Northern Virginia FM Association

**Meetings:** Fall, Winter & Spring

**Weekly Nets:** NVFMA, Wed, 8 PM, 146.79-  
ARES, Sun, 9 PM, 146.91. Equipment Clinic,  
1st Wed of the month, 7:30 PM, 146.79.

**Repeaters:** 52.37/53.37, 146.19/146.79,  
146.31/146.91, 222.50/224.10 Xlink, 222.74/  
224.34, 449.75/444.75, 1272.1/1292.1.

**Membership Info:** Ann Herlich/KD4GSU,  
(703) 481-1458.

**Mailing Address:** NVFMA, P.O. Box 486,  
McLean, VA 22101.

## GENERAL MEMBERSHIP MEETING

Thursday Evening, January 16th, 7:00 PM!  
Virginia Power Company on RT 50 just past the  
West Ox Road Overpass, right-hand side - west  
bound on "50". Special speaker, refreshments,  
door prizes, and most importantly, elections of  
Board of Directors and need of Treasurer and  
Secretary. Phil, KF4AJZ, heading up the Election  
Committee, is looking for your support - please  
step forward in '97 and work with your friends to  
keep the NVFMA the premier repeater system in  
northern Virginia!

Don't forget to check into the NVFMA Talk Net Monday evenings on 146.79 MHz at 8:00 PM, the NVFMA SWAP Net Tuesday evenings on 146.91 MHz at 8:00 PM, and of course, the NVFMA Bulletin Wednesday evenings on 146.79 MHz at 8:00 PM. Steve, W4FMD, as you know has hosted the "Bulletin" for over 20 years! Don't let him down by not checking in on a regular basis - it's a good time to ask questions about the NVFMA, receive propagation news, list equipment for sale, trade, or need, and to let us all know you're interested in your association!

## "SEASONS GREETINGS TO ALL"

Best 73's from Gil, K70R & Ann, KD4GSU



## Prince George's Wireless Association

**Meetings:** First working Tuesday of each month, 7:30 PM; American Red Cross bldg., 6206 Belcrest Rd, Hyattsville, MD 20782

**Club Station:** K3CEZ

**Mailing:** 4109 Kennedy St., Hyattsville, MD 20781

**Information:** Frank Holton - WA3ZMW  
(301) 927-1245

PGWA held its November meeting on Tuesday the 5th, 1996. The President, Frank, WA5ZMW opened at 7:45 P.M. The usual order of business ensued with the reading of minutes and officer reports.

During the SET-Simulated Emergency Test back on October 12, 1996 there was some confusion, by Red Cross personnel in how to write the messages on the official ARRL forms to be sent to our club over the Amateur Bands. So during our meeting we discussed holding some —training classes along those lines.

Once the meeting was adjourned, an ARRL video tape was shown. This tape pictured a Japanese Amateur Radio Club using direction finding on "Fox Hunt" tactics in competition with a Chinese Amateur Club. All of this was accomplished on foot using hand helds and time clocks.

On the first Tuesday in December, PGWA will meet for dinner at Shoney's Restaurant in P.G. Plaza mall area located in Hyattsville, MD. After the dinner, members will return to the Red Cross Bldg. for our Christmas meeting and gift giving. The plan is to find a goodie from your old electronic treasure chest and wrap it in Christmas paper. A number will be assigned to each gift and a corresponding number will be drawn from a hat. Everyone is welcome.

Happy New Year from  
Ken Easton N3HLY



## Quarter Century Wireless Assn. Shenandoah Valley Chapter #137

**Meetings:** Third Wednesday of odd-numbered months, at 12:30 PM; Carper's Valley Golf Club, 1401 Millwood Pike (Route 50 East), Winchester, VA; reservations suggested.

**Information:** Perry F. Crabill, Jr., W3HQX; (540) 662-7526.

**Mailing Address:** 225 Milam Drive, Winchester, VA, 22602.

**E-mail:** pcrabill.visuallink.com

Fourteen members and guests of QCWA Chapter No. 137 met at Carper's Valley Golf Club on Route 50 east of Winchester, Virginia on Wednesday, November 20, 1996. A social period at 12:30 PM was followed by a buffet luncheon at 1 o'clock. The meeting was conducted by Vice President Charles Anderson, NF3X, in the absence of President Walter Johnson, WA4HVU.

Reading of the previous meeting's minutes and the Treasurer's report were waived by a motion approved by the members. John Kanode, N4MM, Chairman of the Nominating Committee, offered the following nominations for officers in 1997: President, Charles Anderson, NF3X; Vice President, John Kanode, N4MM; Secretary/Treasurer, Perry Crabill, W3HQX. There were no nominations from the floor. Nominations were closed by a motion and the candidates were elected by a unanimous ballot.

John Kanode reported on ARRL and FCC matters. Gate 2 for the Vanity Call program received 3,800 applications on the first day. The Northern Shenandoah Valley DX Club was assigned NS4DX as requested. Synthetic aperture radar appears to be a new threat to the amateur 440 MHz band. In September a special event station at the Kennedy Center in DC used the call K3C. It was visited by 5,000 to 10,000 people, including various officials and celebrities. Pictures were to appear in December QST.

Charles Anderson called attention to the forthcoming IEEE EMC Society program to be presented at the McLean Hilton on May 1, 1997.

The speaker was Paul Reid, N4EKW, Spectrum Manager for the Federal Emergency Management Agency. He talked about Spectrum Management for the Atlanta, Georgia, 1996 Olympic Games. This was the largest RF event in history, with over 200 countries participating. Although various other agencies had been doing planning for two years, FEMA was not assigned the Federal Frequency Management Role until April of this year.

The plan evolved included a frequency approval process, interference reporting procedures, and a means of resolving disputes. FCC direction finding teams with the latest equipment did the tracking down of interference. Main problems were intermodulation, shared use of channels, and operation on unauthorized frequencies. Some of the latter situations were caused by misunderstandings and failure to follow

proper procedures. In one case it was necessary to escalate the issue to the highest level at the Pentagon.

The lessons learned from this operation will be applied to future activities with mass communications such as the Presidential Inauguration.

The meeting adjourned at 2:42 PM, with the announcement that the next meeting will be held on January 15, 1996, at the Silver Leaf Restaurant on Valley Avenue in Winchester.

Perry Crabill, W3HQX  
Secretary/Treasurer



## Quarter Century Wireless Assn. Chapter #91

**Meetings:** Neighbor's Restaurant, Cedar Lane and Park Street, Vienna, VA; third Saturdays; Noon. **Business/Program Meetings:** Odd-numbered months. (Come at 11:30 to chat; program begins at noon.) **Informal/Ragchew Meetings:** Even-numbered months.

**Newsletter:** Bi-monthly to all members.

**Information:** Dick Rucker (KM4ML), Secretary; 10426 Darby St., Fairfax, VA 22030-3603; 703-591-3279. Also on the VHF net.

**VHF FM Net:** Sunday 9 AM, 146.79MHz.

November, 1996, Meeting — Unfortunately, President Tony Stalls (K4KYO) was unable to attend this meeting. Vice President Frank Haynes (W4NUA) filled in and welcomed 34 chapter members and guests.

**FLASH!** — We were issued our new club call: W4QCW should be a hit during the QCWA CW and phone parties! Thanks to Tony and John Swafford (W4HU) (trustee) for their work on this. Bix (WA3WQF) will begin putting QCWA-related items on his WA3WQF-1 packet BBS, 145.03 MHz.

**Main Speaker —** We were fortunate to have J.M. "Bix" Bixby (WA3WQF) as our guest speaker. Bix is a Senior Managing Engineer at MLJ, a telecommunications consulting firm in Falls Church.

Almost every Ham knows something about pioneer radio broadcast station KDKA in Pittsburgh, PA. Do you know they used the same transmitting antenna from 1938 through 1994? Do you know why they replaced it in 1994? Do you know the new antenna was designed by Bix? Of course you didn't know these things—so read on!

Bix opened his spellbinding presentation with a recording of a Paul Harvey "The Rest of the Story" episode explicating KDKA's annual "transmitter parties." These celebrated the successful relocation of KDKA's transmitting antenna from its original site at Saxonburg, PA, to a new site in Allison Park, PA. The move was done because the antenna didn't work well at the Saxonburg site.

Bix then told "the rest of the rest of the story" about the antenna's unacceptable performance: At night, a high-angle component of the antenna's vertical radiation pattern reflected from the ionosphere back into the area served by the ground wave signal. This caused what is known as "self-fading" and resulted in severely distorted audio. The antenna was moved to cause the fade zone to fall outside the city's higher-populated areas. This worked, but, as the suburbs grew outward, the population in the fade zone increased. KDKA then decided to have a replacement antenna designed and built. Enter Bix.

Bix described the many challenging design constraints of the new antenna and how each was met. A computer-based antenna modeling tool (MININEC was used) was essential for the design. Bix showed how an antenna of the same physical height (718 feet) was designed to have a different current distribution that resulted in meeting stringent coverage-area goals. He also discussed many other related topics, such as the method by which the antenna was fed, its ground system, and

its lightning protection.

The antenna met all its design goals. When the new antenna was switched into service, the first words radiated by it were, "This is KDKA, Pittsburgh." The announcer was Bix.

Bix showed a videotape of the toppling of the old antenna and explained how this was accomplished. The tower landed within inches of where it was planned to fall. Bix showed us a four foot long piece of a cross-member of the old tower. It was about 1-1/2 inches in diameter and of solid steel.

Bix then responded to questions about the KDKA antenna, antennas in general, and also about the recent FCC ruling requiring Hams to determine the power density radiated from their antennas. The discussions from all this were engaging ... but we are out of space! Too bad! If you weren't there, you really missed a fine meeting!

Finally, long-time Chapter 91 member Bill Miller (K4MM) was an engineer at KDKA in 1938-1939 and may have been the one to shut down the antenna for its last transmission from Saxonburg. Bill, who was unable to attend Bix's talk, told me that he would receive switching orders sent in land-line Morse (not CW) on a phantom circuit between the broadcast and overseas studio lines; this was done to save long-distance tolls.  
**Election of Officers** — The Chapter 91 officers for 1997 are President: Frank Haynes (W4NUA) Vice President: Al Wheeler (WB4JJJ) Recording Secretary: Dick Rucker (KM4ML) Treasurer: Al Cammarata (W3AWU) Corresponding Secretary: Jim Wilcox (W3WV). We look forward to having them serve the chapter.

We thank the officers who served this past year: President Tony Stalls (K4KYO), Vice President Frank Haynes (W4NUA), Secretary Dick Rucker (KM4ML), Treasurer Al Wheeler (WB4JJJ), and Corresponding Secretary Jim Wilcox (W3WV).

**Auction** — The auction and related events brought in \$79.00 for the chapter!! Many thanks

to those who contributed auction items: Nelson Seese (W4BHD), Carl Gray (W4ACM), Jack Kelleher (W4ZC), and Bob Fasulkey (W3BBQ). Thanks also to Phil Schroeder (KF4AJZ) for his monetary gift.

**Chapter Reports** — Secretary Dick distributed minutes of the previous meeting and noted that he sends copies to all members who have e-mail.

Treasurer Al reported that a detailed balance sheet for 1996 was in our November newsletter. He has submitted a proposed budget for 1997 to the Executive Committee.

ar 73 de Jim, W3WV



### Southern Maryland Amateur Radio Club

**Meetings:** 2nd Friday of each month at 1930 ET at the PG County Police, Clinton Station, 6707 Groverton Drive, Clinton, Maryland.

**Nets:** Tuesday at 2000 on 147.15+ Repeater; Wednesday at 2000 on 1.865 (+/-QRN); Thursday at 2000 on 28.447 USB.

**Repeater:** WA3YUV/R 147.15+, Brandywine, Md. Autopatch to 911.

**Mailing Address:** P.O. Box 273, Cheltenham, Md, 20623

**Information:** Vic (WA3YUV) & Linda (KA3VNI), (301) 888-1388.

**Internet:** <http://www.iscanit.com/smrc>

The officers and members of SMARC hope that you had a very enjoyable and safe holiday. After a very exciting and eventful 1996, we are looking forward to even more adventures this coming year.

In case you happen to have missed all the excitement of the last election night, the following are the officers of SMARC for the coming year:

<b>President</b>	Mike Martin, N3RWF
<b>Vice President</b>	Vic Curtis, WA3YUV
<b>Secretary</b>	Jim Rose, N3FEW
<b>Treasurer</b>	Richard Eshelman, WK3I
<b>Activities</b>	Greg Dominguez, N3MPR
<b>Public Service</b>	Ric Creager, KK4GV
<b>Board of Directors</b>	
	Sam Sullivan, N3GHY
	Allen Stevenson, KA3ZPA
	Ken La Capria, KA3POX
<b>Repeater Trustee</b>	Vic Curtis, WA3YUV

Our congratulations go to all the new officers and our best wishes they don't find out what they got themselves into.

All organizations have a backbone of dedicated members who can always be relied upon whenever things need to be done. SMARC has been fortunate to have a number of these folks who have given of their time to work on the repeater, help disassemble the system at the old site, and relocate it to the new one. These are the same folks who can be relied upon to be there for any of our public service events.

This past year the Board decided to recognize the contributions of these 'unsung heroes' by the establishment of a SMARC Ham of the Year award. The new award is presented by the Board of Directors at the annual Christmas party, on the behalf of the membership to recognize the special contributions of that individual.

This year Al, W2GJS, is SMARC's Ham of the Year. Al is one of those stalwart members of SMARC who can always be counted on to help in whatever way he can, including the donation of equipment to the club. Not only has Al helped with SMARC activities throughout the year, he serves as the editor of the Club's monthly Newsletter, 'SMARC Sparks'. Congratulations, Al, we all are proud of you.

Congratulations are also in order for Larry, WD3P, who recently completed "Worked all Counties". After several years of effort, Larry kept

with it to achieve this amazing accomplishment. Way to go, Larry.

You hear a lot these days about how Amateur Radio is becoming 'obsolete' to other digital technologies, like cellular telephones and computer communications. One night about a month ago proved how wrong that assumption is.

An automobile accident occurred one evening where one of the drivers was an Amateur. Although equipped with cellular telephone, CB, and Amateur Radio, only one worked when the need arose. After the crash, for some reason, the cellular telephone would not operate and the garbage on the Children's Band was so bad that assistance calls were useless. The ol' standby, Amateur Radio came to the rescue.

An emergency call went out on the .15 repeater for someone to assist. Immediately Dave, KE3ID, offered assistance. Dave coordinated the call to 911, passing on valuable location and incident information directly to Fire/Rescue/Police communications, directing them quickly to the location. He also placed phone calls to the family involved, reassuring them of the situation.

At the same time Allen, KA3ZPA, who was on his way home from work called in to offer direct assistance. Allen redirected his trip to arrive quickly on the scene and provided valuable assistance removing personal items and radio equipment from the Amateur's severely damaged vehicle. Allen not only checked on the condition of the driver as the rescue personnel prepared him for transport by ambulance, but went to the hospital to provide assistance until the arrival of the family later at the hospital. Allen provided critical communications with family members and the investigating police officers, staying at the hospital until the driver was fully assessed.

I know, I was that driver. The SMARC membership is a special group of people. In time of need, they can all be relied upon to do whatever needs to be done, as in the case of Dave and Allen.

My personal thanks go out to Dave and the other members who stood by to provide whatever help was needed, but especially to Allen, without whom the outcome would have been much different. Words will never be able to express my thanks, Allen! This is what Amateur Radio is all about, folks, refining our communication skills so that when the need arises, we will be there. For me, SMARC was there. I'm proud to be associated with such a fine group of individuals.

And that is the big news from southern Maryland. Make sure you check out our ever improving Internet site. Make one of your resolutions to keep up your communications skills, and we will see you here again next month.

73, WA3FSC  
SMARC PIO



### St. Mary's County Amateur Radio Association

**Meetings:** Fourth Thursday of each month, 7:30 PM, at the Lexington Park library.

**Repeater:** K3HKB (146.64 MHz)

**Packet:** K3HKB.#SOMD.MD.USA.NOAM (145.75/145.01/223.58/440.975 MHz)

**Lunch Bunch:** Every Friday, listen on the 146.64 MHz repeater between 10-11:30 AM to find out where to meet.

**Nets:** - "St. Mary's ARES", every Monday at 8:00 PM on 146.64 MHz - "Bottom County", every Wednesday at 8:00 PM on 146.64 MHz.

**Address:** SMCARA, P.O. Box 743, California, Maryland 20619.

**Newspapers:** Complimentary copies are available at local Radio Shack stores.

SMCARA celebrated its 40th anniversary in 1996. At a celebration dinner recently, 35 association members and guests shared in the remembrance. As the oldest active amateur radio club in Saint Mary's County, SMCARA remains

committed to serving the area and promoting the positive uses of Ham Radio. With the new officers in place and another aggressive year planned for 1997, including classes for new amateurs, we are looking forward to another forty years of service.

Happy New Year to all.  
73/Mark KE3OX



### The Middle Atlantic FM and Repeater Council, Inc.

**Meetings:** Coordinating Committee (CC) normally meets the last Monday of each month, 19:30, in the OEP conference room of the Prince George's County Emergency Operations Center off Central Avenue. Talking on 147.18.

**Address:** P.O. Box 1022, Savage, Md. 20763-1022 for all correspondence.

**E-Mail:** T-MARC@T-MARC.ORG.

**Web Page:** HTTP://WWW.T-MARC.ORG.

**Information:** President - Owen Wormser K6LEW (703)684-7682 CC Chairman - Bill Conaway W8HNT, Pager (703)741-4251. Ombudsman - Jim Erickson K3LFO (410)549-1041, K3LFO@APEXGRP.COM.

We had a nice turnout at the Annual Meeting on November 17th. Many thanks to our host, the Baltimore Amateur Radio Club, Phil N3CDY and Chuck K3FT. There were no nominations for new members of the Board, so all current members were re-elected by acclamation. The board includes Owen K6LEW, president; Bill W8HNT VP-Ops and CC chairman; Gary W3DTN, VP-PR; John K3HOI, Sec/Treas; plus Bill W3EAO, Sandy WB5MMB, and Larry WA3KOK. However, John K3HOI, the T-MARC secretary, would really like to retire, so if anyone can help, PLEASE let us know.

K6LEW and Hugh W3ABC, ARRL-VP, reported on the Memorandum of Understanding

between the League and the new National Frequency Coordinator's Council (NFCC). The membership approved a motion that T-MARC join the NFCC and pay annual dues of up to \$100. Other motions which were approved include 1: a policy change which reads "12d A system's coordination may be canceled if, in the opinion of the Researcher, it has been off the air for at least 30 days, and its sponsor has not replied within 30 days to T-MARC's request for the system's status", and 2: electronically filed coordination applications which do not require an original signature on paper.

Several motions were discussed and failed to meet membership approval, including, 1: coordination of an entire system would be canceled if the operation of any portion of that system was outside of its coordination parameters, 2: defining a system as being in operation as long as it provides reliable coverage of at least 75% of its coordinated service area, and 3: payment by the ARRL for repeater database information.

W3EAQ made a presentation on band planning, after which the membership approved a proposal to create an open standing committee for band planning (OBC), which is intended to include all forms of operation on the VHF and higher bands. See the separate article elsewhere in this issue of Auto-Call. The members approved the transfer of sponsorship of several repeaters (145.13,

224.80, 224.94, and 443.35) from Terry WA3DZZ to the Baltimore Radio Amateur Television Soc. Also approved was an administrative procedure for the Board to approve simple sponsor name changes without referral to the membership.

Jim K3LFO described the positions of Ombudsman and the new "Researcher", appointed positions which he currently fills. The Researcher will determine the status of currently coordinated transmitters, and the Ombudsman will fill the traditional role. As Researcher, Jim is looking for information about repeaters which may not be operating. As Ombudsman, he invites anyone who has any problem with the performance of T-MARC to send written complaints to him, and he will try to resolve the problem.

In an effort to improve communications between T-MARC and system sponsors, our secretary would like all sponsors to send us your E-mail addresses. Please send them to "T-MARC@T-MARC.ORG". Our Web page now has the complete, up-to-date Repeater Directory. Stop in and take a look!! A new coordination was issued to N3MVL for 145.23 at Hagerstown, Md.

I guess that's all the news for now. I hope you all have a happy, safe and profitable New Year!

73, Gary, W3DTN, T-MARC PIO

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## ARRL Report, continued from page 12

things about Amateur Radio during her several NASA post-flight press conferences. She spoke about how great it was to QSO her daughter, KC5UAR, and son-in-law, KC5UAQ. She spoke about how some of her fellow astronauts often went to Johnson Space Center's ham station, W5RRR, to speak to her. She also mentioned that K4GCC at Kennedy Space Center, phone-patched the NASA commentary of the STS-79 launch (the mission that brought her back home) to Mir. She also discussed the Ham radio activities of Mission Specialist Jay Apt, N5QWL,—Rosalie White, WA1STO

**Aurora '97:** The Northern Lights Radio Society presents Aurora '97, the 14th annual upper midwest VHF/UHF/Microwave Symposium, Saturday, April 19, 1997, at the Village North Professional Building, Brooklyn Park, Minnesota. This year's conference is being moved from its former date in February and expanded to a full day. For more information, check the NLRS web page, <http://www.tc.umn.edu/nlhome/m374/husby002/> or contact Donn Baker, WA2VOI, 3128 Silver Lake Rd, Minneapolis, MN 55418, tel 612-781-1359 or send e-mail to Rich, NOJHZ, at [n0hjz@aol.com](mailto:n0hjz@aol.com).—Paul Husby, W0UC

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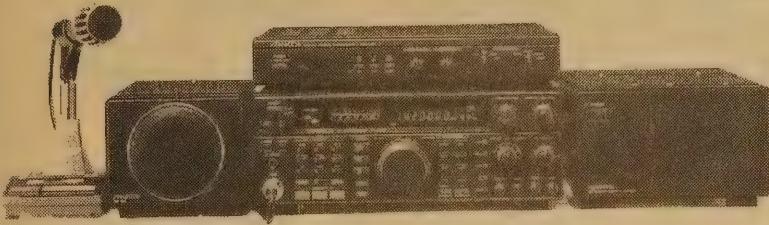
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Estate sales for Widows assistance handled by a FAR club will be published without cost.

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**John Queen, Auto-Call Editor  
755 Woodland Way, Owings, MD 20736  
(301) 855-0198**

**FOR SALE:** 45' Vesto tower. You take down, \$150.00. Leo Young (301) 248-2699. [01/97].

**WANTED:** Apple I microcomputer for museum, KK4WW. (540) 231-6478 / 763-2321. [06/97]

**FOR SALE:** SGC Smart Power Cube, 500 watt amplifier with fuse and 2 PS-50 power supplies, \$1500. AEA Isoloop 10-30 antenna with IT-1 Isotuner, \$350.00. (703) 938-1329. [03/97]

**FOR SALE:** Want a history of your amateur call? Name and address of each prior holder since 1912 for \$20. Bob Arrowsmith K4JN, P.O. Box 166, Annandale, VA 22003. (703) 560-7161. [01/97]

**FOR SALE:** Bencher BY-1 iambic paddle, \$25.00. SST compact sealed dummy load 1-225 MHz, \$25.00. Kenwood R-1000 HF receiver, has PLL problem, make offer. Bennett, KC5CW, (703) 553-8248, bkobb@nova.org.

**FREE:** To good home: Heathkit GR-2000 Color TV, working with vertical problem. This pioneer of digital tuning includes sturdy custom cabinet,

twin speakers, clock module, Heath IF upgrade, all docs, test meter, plus full set circuit boards & chassis parts from another GR-2000. Call Mike Steussy, AE4R, (703) 281-0010 after 7PM.

**FOR SALE:** Kenwood TS-440S/AT with filters, box, manual. No PS. Not Working. \$150.00 firm. Bud, W4YE. (703) 830-3195.

**FOR SALE:** ICOM 144MHZ all mode transceiver model IC251A. Table top transceiver (110V ac or 12V dc) in excellent condition. With manual and handmike. \$150. Modem, Practical Peripherals 14.4 V.32BIS minitower Data/Fax modem. This is an external modem with stand and free modem cable. Guaranteed. \$40. Yaesu memorizer, 144MHZ FM rig with mike and manual. Works, loses lock periodically. \$30. Yaesu FT230R 144 MHZ FM transceiver with mike and manual. Works with audio fading away. \$40. Bernie, W3CAO, 301-271-2714 in Thurmont, MD.

**FOR SALE:** Estate: Kenwood TS520S transceiver in pristine condition. Phone patch, BC348P receiver, Heath Signal Generator, Heath VTVM,

\$350.00 takes all. (703) 690-1568. [1/97].

**FOR SALE:** Wide band antennas. Remote coax switches. Test equipment. SSTV gear. Over 200 coax connectors and cables. Have Zenith VM 6180 video camcorder. Compact VHS with auto focus, HQ circuitry, extra battery, adapter for TV, and fiber case. Used once. Cash \$400. Larry W3MSN, Oxon Hill, near beltway. (301) 894-3977.

**WANTED:** Commodore VIC 20 computer. Call John, (301) 552-3456.

**FOR SALE:** 4 bedroom 2 and one half bath all brick split foyer home in Annandale Virginia, convenient to the beltway. Home comes complete with 48 foot Rohn HBDX48 tower with antennas for all amateur bands from 160-2 meters including triband beam for 20/15/10 meters. Sale Price \$197,500.00. Address 7707 Heritage Drive, Annandale VA 22003. For more info telephone Chris Ramsay N4YE at (703) 256-8087. [2/97]

**FOR SALE:** Our club has two Motorola MOTRAC 2 mtr repeaters for sale. 120 watt (3 tube) xmitter and solid state receiver. Both in good working condition. We are replacing them and simply want them out of the shack. Spare tubes and documentation included. Presently operating in the DC Metro area. \$50 each (that's right!) \$50 each! Call KD3VR 301-577-3749. The repeaters will be available in December 96. Pickup only please.

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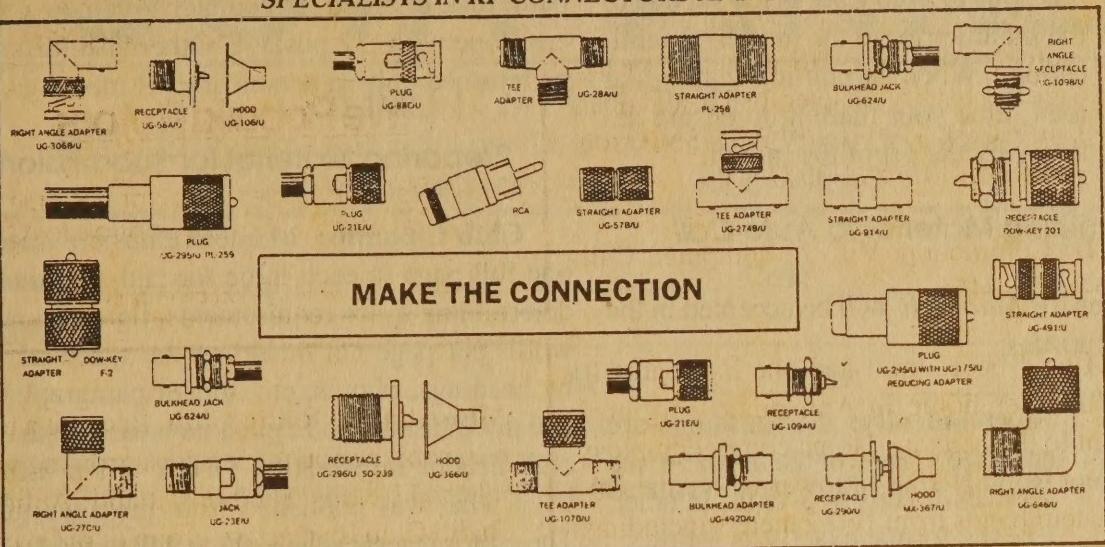
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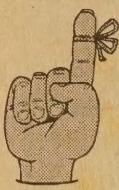
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**Deadline:** The deadline for ALL submissions to *Auto Call* is the 1st day of the month prior to the month of publication. When submitting via regular mail, time your mailing to ensure delivery by the 1st of the month.

## Submitting Material to *Auto Call*

Submissions for *Auto Call* will be accepted in the following formats:



**Electronically:** Submissions are accepted via any of the major on line services directly or over the Internet. Use the format exactly as follows:

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**America On Line** - JohnQueen

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**BitNet** - johnqueen%aol.com@cunyvm

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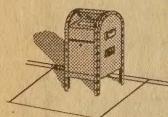
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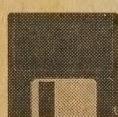
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**Regular Mail:** Mail typewritten or computer generated hard copy to: John Queen, Editor, Auto Call Magazine, 755 Woodland Way, Owings, MD 20736. Ensure that your printed material is dark enough for scanning.



**Computer Disk:** Submissions are accepted on 3.5" or 5.25" computer disk, in either Macintosh or MS-DOS format, using Word, WordPerfect, or standard ASCII text files. Write your name, telephone number, and club name on the disk. Submit graphic files (club logos, etc) in an EPS or TIFF format. Please verify the readability of your com-

puter files before sending. If you want your computer disk returned immediately, include a SASE envelope with .32 postage. Otherwise, disks will be returned only in person at FAR meetings.

## Preparing Material for Submission

**Club Columns:** Member clubs are allocated one full page in each issue for club columns. In determining space requirements, figure about 700 words per page not including the space taken up by headings, photos, etc. Indent paragraphs .25" and double space to begin a new paragraph. Send club header information ONLY when different from what was published from previous month. The editor reserves the right to edit any submitted material for space, content and/or applicability.

**Hamfests/Events:** Member clubs are allocated one full page per year to promote one club sponsored hamfest, convention, or special event. Submit clean black & white camera ready copy only by mail. Master copy should be in black ink on white paper and should be in proper page ratio, (Copy space is 7" wide by 9" high). Copy can be reduced or enlarged as necessary. Electronic submissions of Hamfest ads will not be accepted.

**Photographs:** The editor will select the best photograph submitted for the cover each month. Photographs should depict club members, club stations, or amateur radio related events that are current and noteworthy. Clubs may also submit photographs for inclusion with their club column. Photographs will be used in columns when space permits. Either B&W or color photos can be used. For each photograph submitted, write your name, phone number, and club name, along with a description of the photograph on a piece of paper, and tape it on the back of the photograph. Do not write on the back of your photo. If you want your photos returned immediately, include a SASE envelope with sufficient postage. Otherwise, photos will be returned only in person at FAR meetings.



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# Area Club Meetings - January 1997

<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
		<b>HAPPY NEW YEAR'S!!</b>	1 BARC Montgomery	2 AnneArundel	3 Mobileers Shenandoah	4 Green Mtn.
5	6 DOSARC	7 Antietam PGWA	8 FAR - VA HEMARC Exp Post	9 MADRAS Mid-Atlantic Mt. Vernon	10 VOA Vienna So. Maryland Alexandria	11 North Point
12 Metro Comm	13 Carroll Co.	14 Leisure Fauquier Frederick Woodbridge	15 BARC/QCWA Goddard Montgomery	16 AnneArundel	17 Shenandoah	18 Capital City QCWA 91
19	20 OVHA Sterling Park	21 Antietam Arlington	22 Moose Exp Post Laurel	23 MADRAS St Mary's	24 Central MD Vienna	25
26 Adventist	27 Green Mtn. TMARC	28 Columbia	29 Carroll Co.	30	31	



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